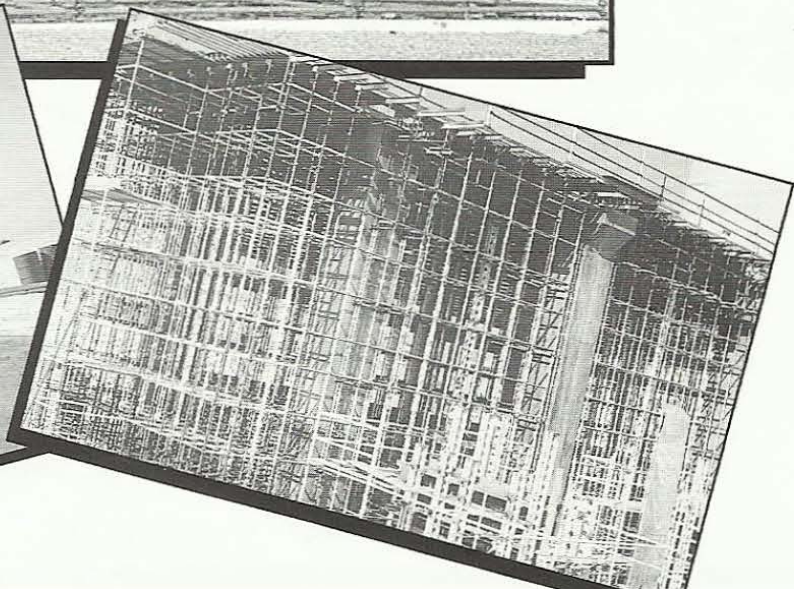
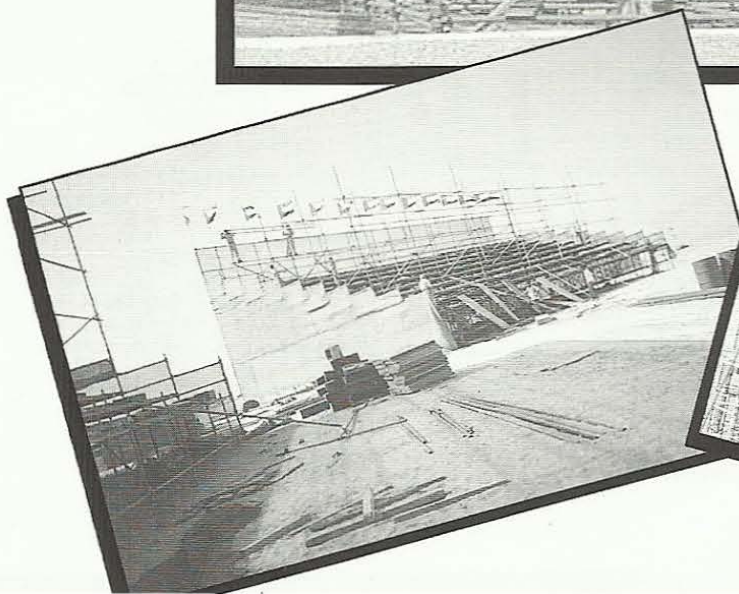
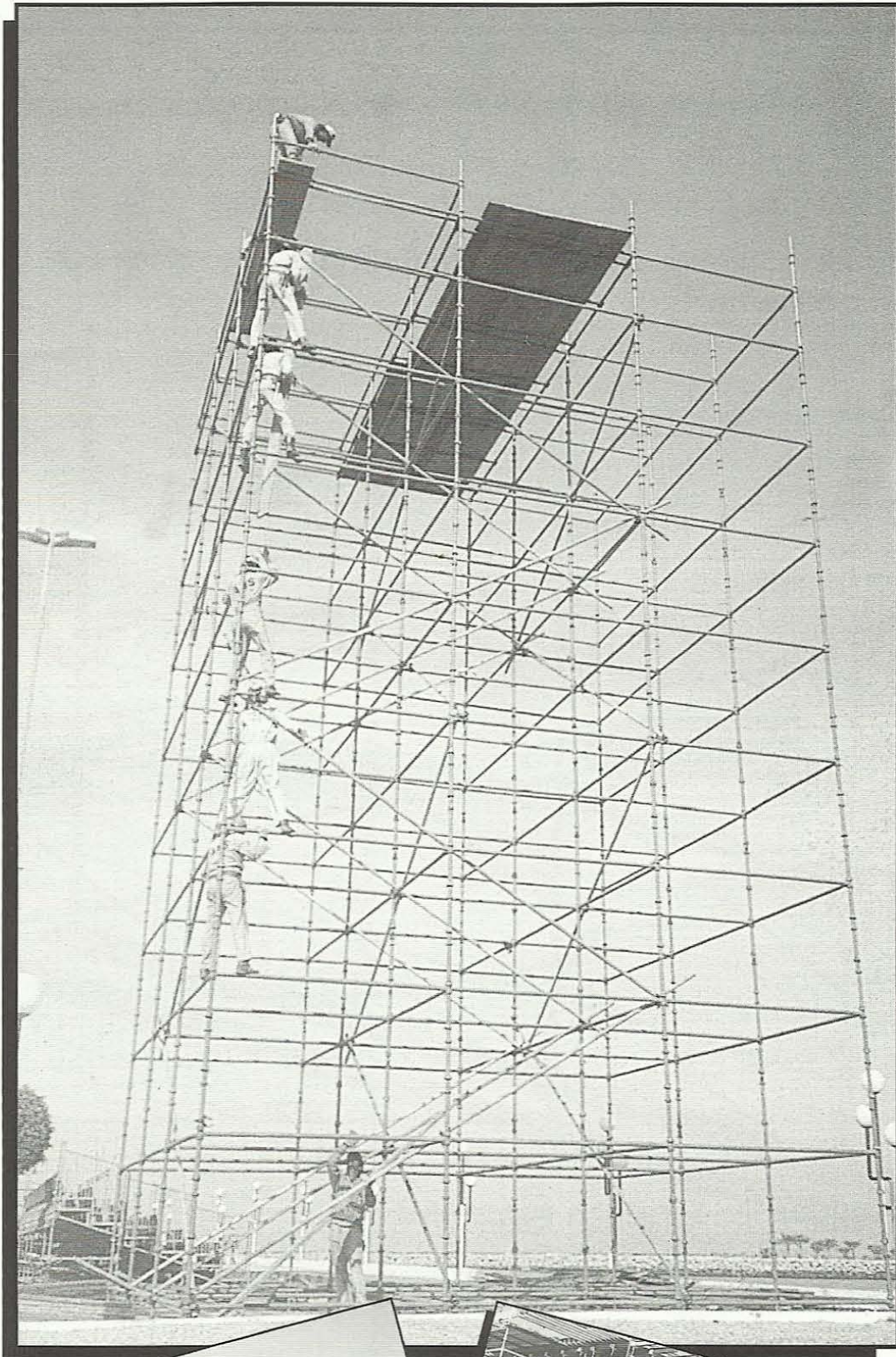
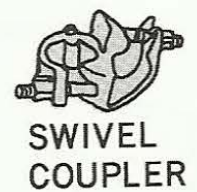
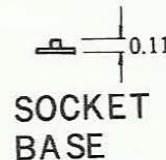
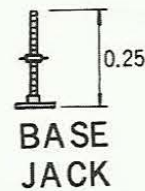
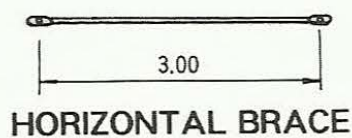
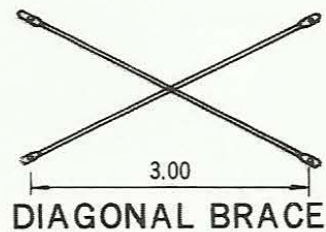
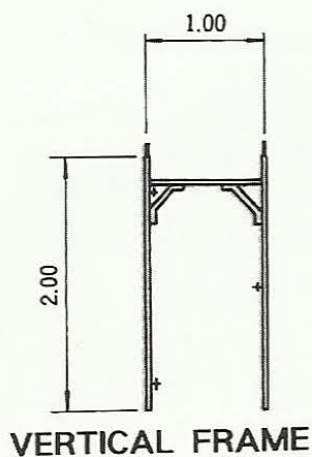
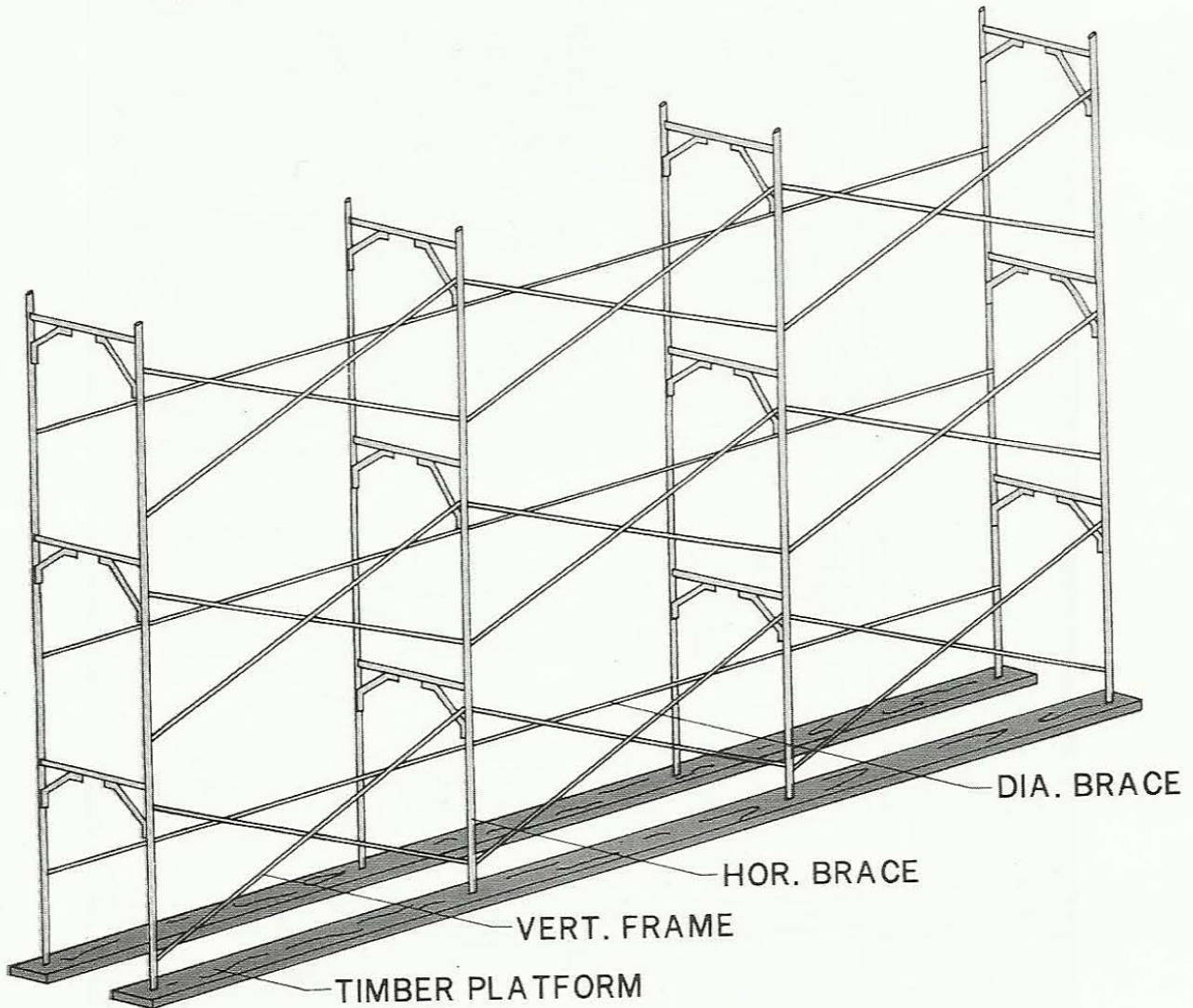


... THE SKY IS OUR TARGET ...

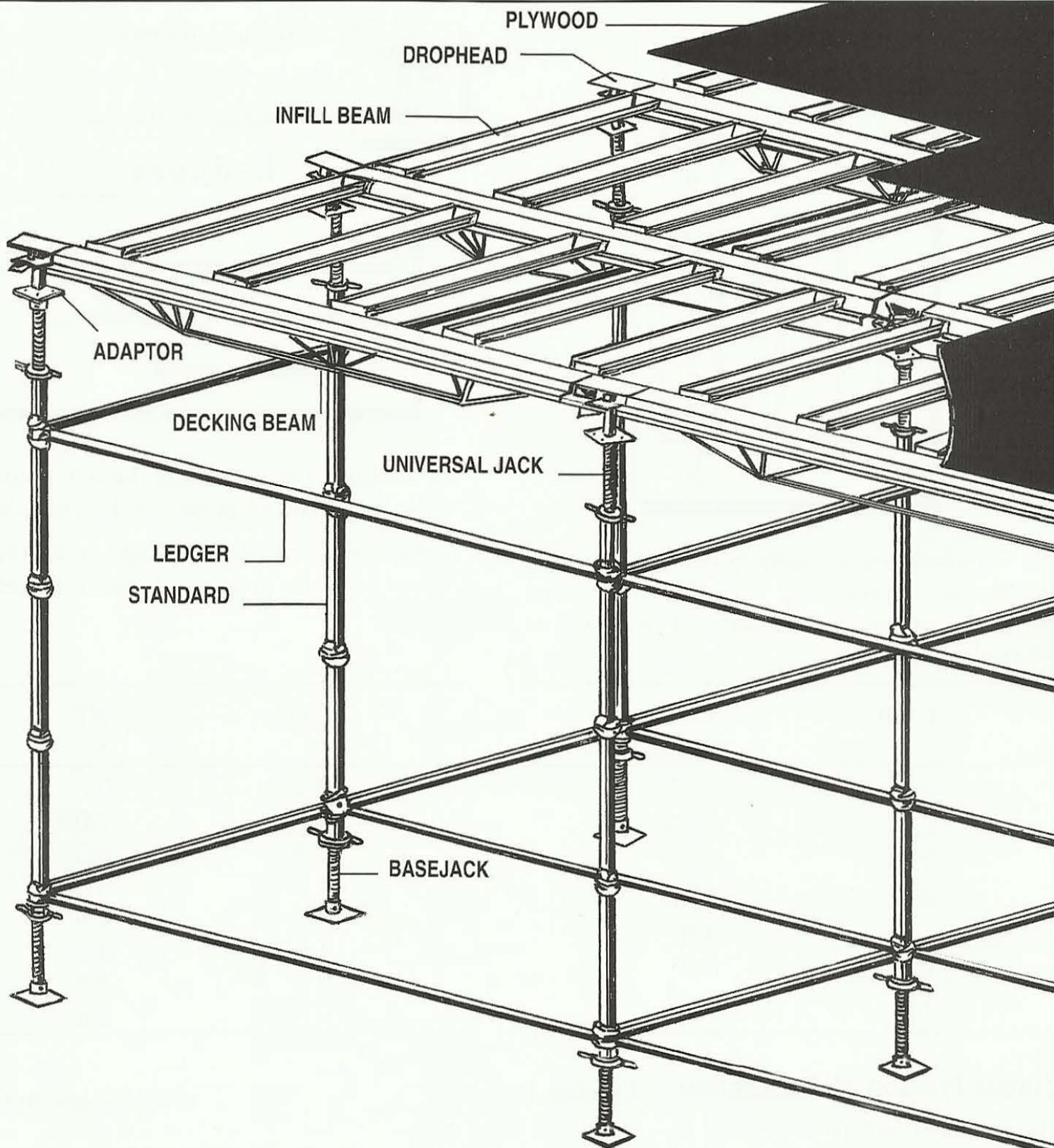


ACCESS SCAFFOLDING

1. The system has built in spigot which allows faster assembly and dismantling.
2. The frame has tubular dia. Brace for Better rigidity
3. The Braces are longer for more scaffolding area to serve light weight access requirements.

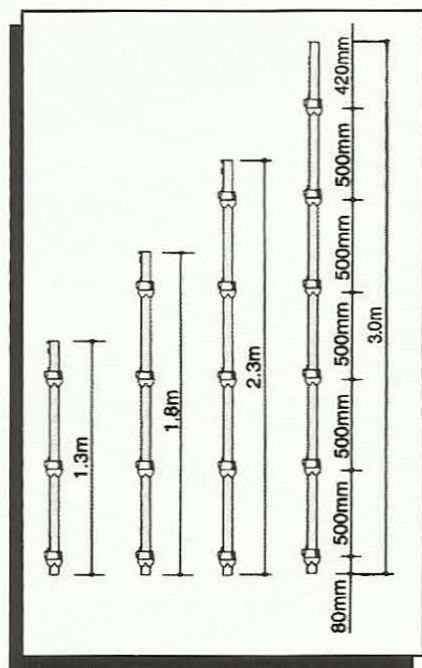


ONELOK ACCESS, SUPPORT & DECKING SYSTEM



The versatility of the Onelok system enables it to be used in a wide range of access and formwork applications, from normal civil projects to complex mechanical projects. The Onelok system can be erected and dismantled very quick. All components are of standard length and all fittings are prepositioned. This minimises the need of skilled operatives. Each component interlocks with the other in such a way that gravity ensures a positive connection.

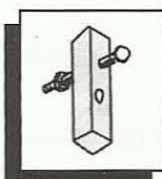
Standards



The Standards are available to suit any propping or access application economically. The Standards can be used for support or access as required.

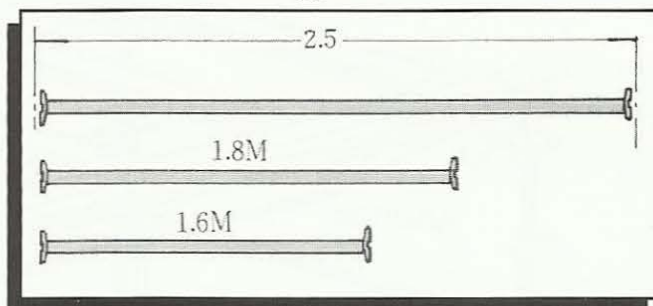
L (M)	WT KG
3.0	16.2
2.5	13.5
2.3	11.8
2.0	11.0
1.5	8.0
1.3	6.8
1.0	5.2

Spigot Connector



Standards are connected end to end by an internal Spigot. A bolt is used to connect to the lower Standard.

Ledgers



All Ledgers have identical forged Blade ends, with a minimum of projection to avoid damage.

Ledgers are available in a range of standard sizes or can be made to special length if required.

L (M)	WT KG
2.5	9.6
1.8	7.0
1.6	6.3
1.3	5.3
1.2	4.9
1.0	4.2
0.9	3.8
0.6	2.6

Unique Method of Connection

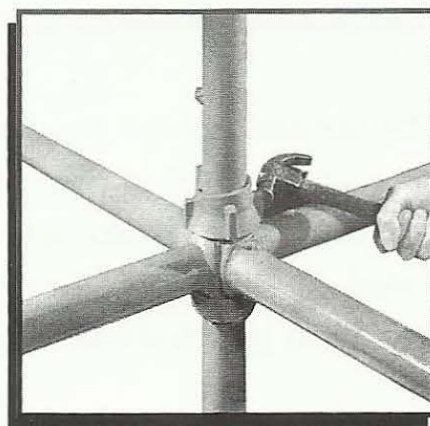
The principle feature of Onelok is the unique method of connecting ledgers and transoms to the standards in one single action without the use of nuts, bolts or wedges.

The locking device is formed by two cups, a fixed lower cup which is welded to standard at 0.5m intervals and a sliding upper cup is moved down and rotated by hammer blows to give a positive and rigid connection.

Onelok Benefits

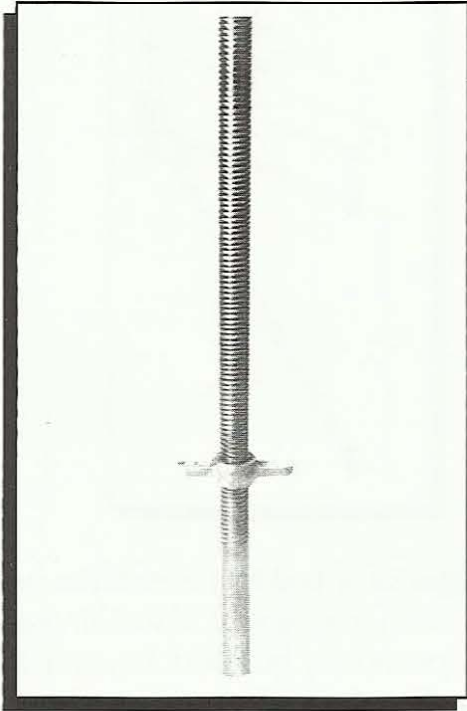
- Safe & Strong
- Savings in erection times-fast to assemble
- Simple to erect
- Full Design Support with C.A.D.
- Fully Systemised can eliminate tube and loose fittings
- Components up to 20% lighter than traditional counterparts
- Versatile for support and access
- Confidence from in-depth technical support

One Single Action



Tighten with a hammer blow

Universal Jack

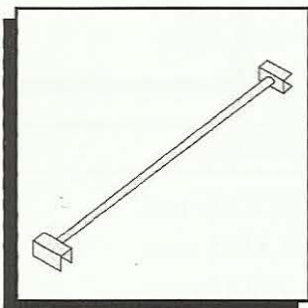


The 57kN capacity galvanised Universal Screw Jack has an adjustment range of over 50cm. It is manufactured from 3.8 cm outside diameter steel tube with a rolled square thread for fast trouble free operation.

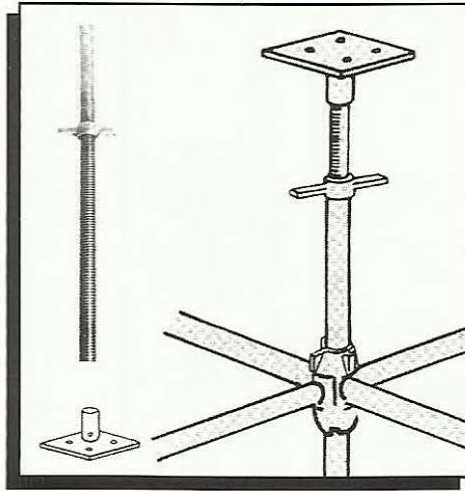
The Jack can be used either at the top or the bottom of the vertical standard. In each case the unthreaded portion is inserted into the Vertical so that the correct amount of the Jack always remains inside the Vertical for safety.

<u>Length</u>	<u>Weight</u>	<u>Effective</u>
860mm	3.9 Kg.	620 mm
400mm	3.3 Kg.	250 mm

Intermediate Transoms



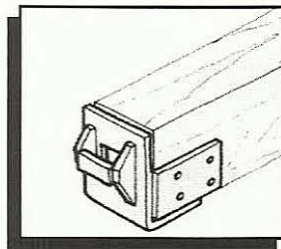
Socket Base



This Component is used either as a base plate at the bottom of a jack to give the necessary spread of load, or when the jack is used at the top of the vertical, as a head plate to accept a Drop Head.

<u>Height</u>	<u>Weight</u>
110 mm	2.3 Kg.

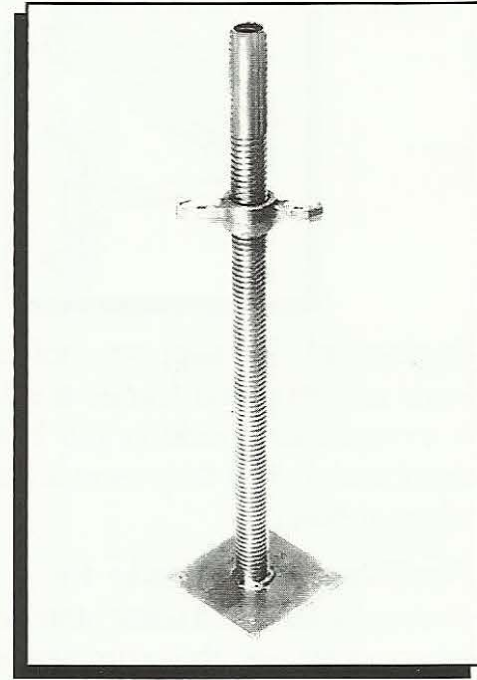
Beam Shoes



A simple attachment allowing a 150mm X 100mm timber beam to be used for non-standard or special length beams. Shoes are nailed to the timber beams, allowing them to fit to drop-heads.

<u>Length</u>	<u>Weight</u>
1300mm	5.5 kg.
1800mm	7.3 kg.
2500mm	9.5 kg.

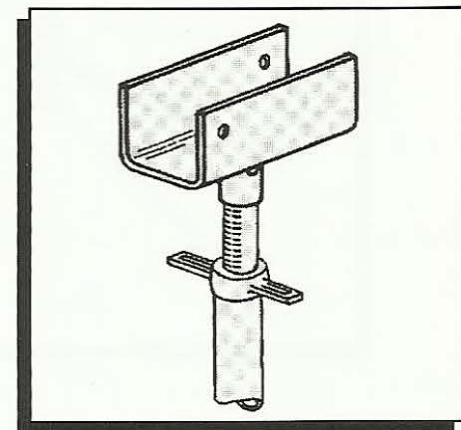
Base Jack



The adjustable Base Jack is used at the bottom of the Standard to provide an additional maximum adjustment of 500 mm.

Permissible Axial Load 57 kN

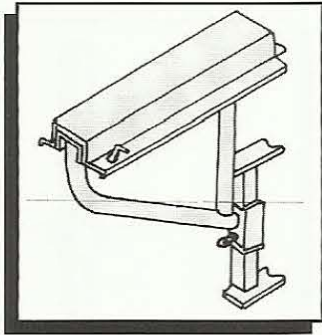
Forkheads



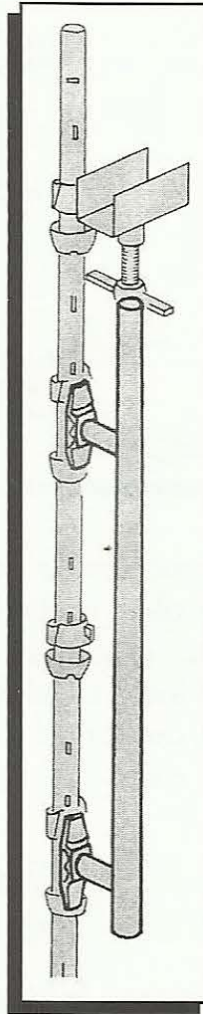
For traditional timber, steel or aluminium beam support. Designed for use with single or double timbers of 75mm nominal width. Used with a Universal jack to give height adjustment.

SUPPORT COMPONENTS

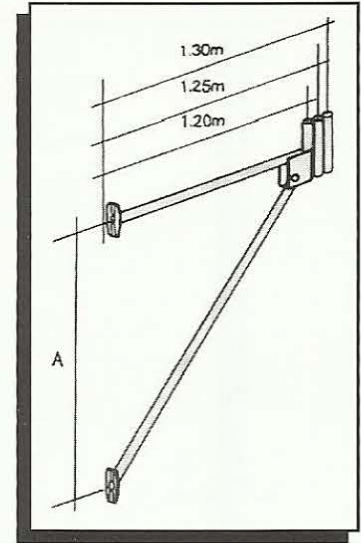
Cantilever Beams



Beam Bracket



Cantilever Frame



Engineered to support normal access loads and stop-end forms; a safety device is incorporated locking the beam to the drophead so that they cannot be dislodged when striking.

Provision is also made for a guard-rail post to be attached using standard scaffold tube and fittings, thus eliminating the need for an external scaffold a big saving in construction costs.

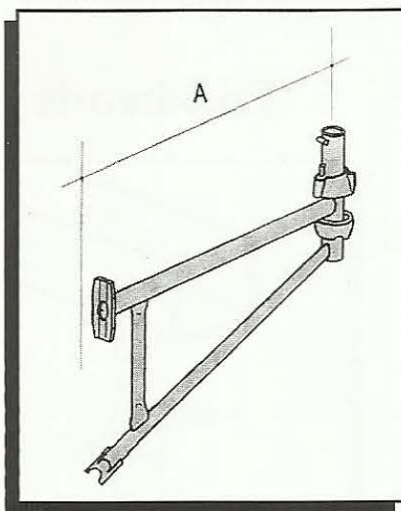
Length (m) Actual	Nominal Effective width (mm)	Weight (kg)
0.524	100	12.5

At the edges of a building it is often necessary for economy, speed of working and safety to provide a support beyond the edge. The Cantilever Frame fixes directly to the Vertical at the node points.

The frame accepts Universal jacks for carrying all type of support, forkhead, drop-heads etc. This item is invaluable for supporting slab edge formwork.

A(m)	Wt (kg)
1.0	18.5
1.5	20.5

Hop-up Bracket



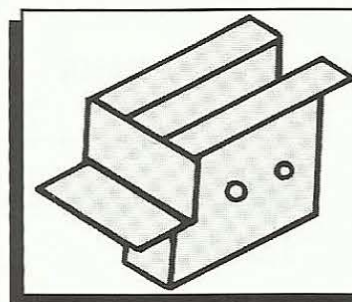
Eliminates full height propping to beam formwork by locating on to slab support verticals as shown, accepts standard jacks and forkheads.

SWL(kg)	Wt (kg)
1500	6.6

These small Cantilever Frames are for applications where access is required beyond the main scaffold for working but not for supporting materials.

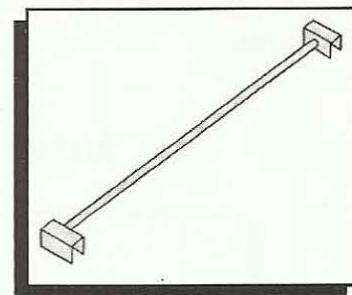
A(cm)	Wt (kg)
56.5	6.3
79.5	7.7

Infill Beam Shoe



Weight = 270 kg

Uni-Ledger



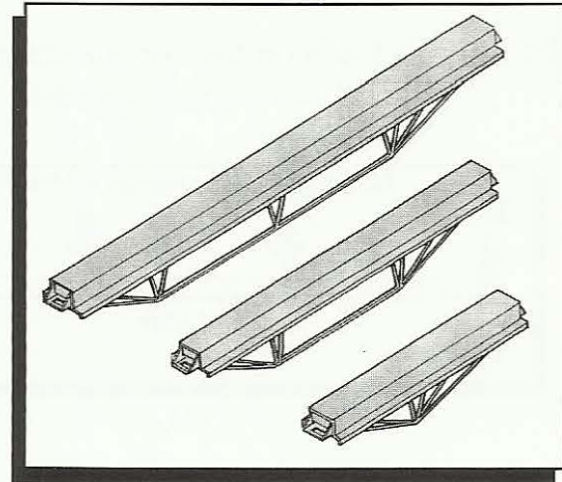
Length	Weight
1300 mm	5.5 kg
1800 mm	7.3 kg
2500 mm	9.5 kg

DECKING COMPONENTS

Decking Beams

The lightweight steel fabrication includes a 100mm wide top flange which eliminates the necessity for a plywood infill, so cutting down maintenance costs. Heavy duty pressings are fitted to the beam ends ensuring adequate protection against site abuse. These incorporate a tongue location for the drop-head.

Length(m)		Effective	Weight
Actual	Nominal	width (mm)	(kg)
1.05	1.2	100	12.0
1.65	1.8	100	18.0
2.35	2.5	100	26.5

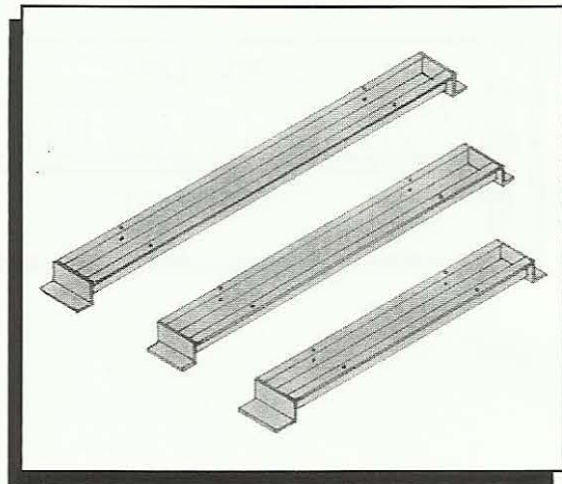


Infill Beams

The infill beams have been designed to be used with the Decking Beams to provide a support for plywood decking.

The infill beams come in 4 lengths to allow for flexibility of grid sizes to suit all types of slabs. A Timber Beam Shoe is also available for small timber make-ups.

Length (m)		Weight
Actual	Nominal	(kg)
1.70	1.80	13.00
1.50	1.60	11.80
1.20	1.30	9.50
0.90	1.00	7.40



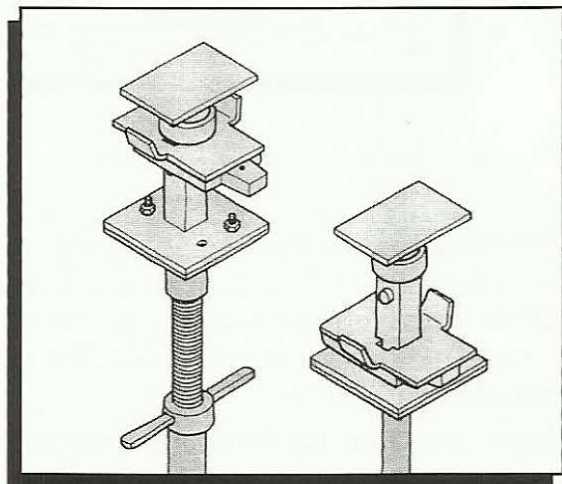
Dropheads

The quick action drophead supplied with nuts and bolts, is designed to fit on standard props or adaptors for Onelok scaffolding. They allow panels and beams to be struck and reused after only 3 or 4 days, leaving the support in position for the remainder of the curing period of the concrete slab.

The primary head remains in contact with the concrete whilst the secondary head and its supporting wedge are released by a single hammer blow. The height of the drop-head is 214 mm and the striking distance allows the beams and panels to drop only 115 mm for their safe removal a marked improvement in terms of speed and safety compared with others systems.

The drophead has a load carrying capacity of 40 kN.

Height (mm)	Head Dimension (mm)	Weight (kg)
214	152 x 100	5.4



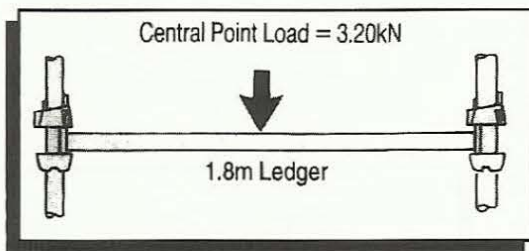
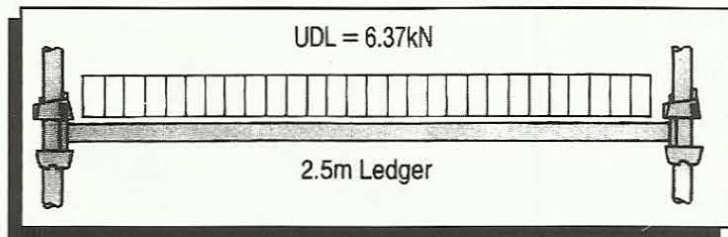
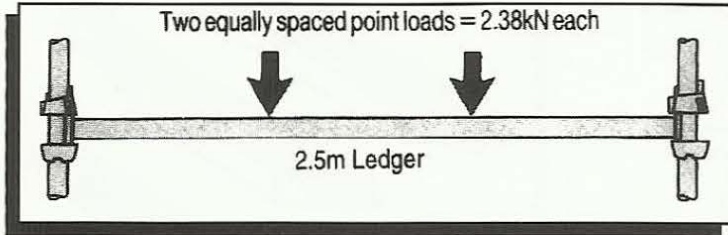
Drophead raised.

Drophead struck.

LOADS

Permissible Loads on Horizontal Components

Permissible loads on the various components are shown in the diagram



Permissible Loads on Base Components

Vertical Axial Load up to 57kN

The loadings will vary according to the horizontal loads taken into account and the actual extension of the Jack required.



86 cm Universal Jack

Permissible Loads on Standards (in Falsework Structures only)

The tables below show the permissible loads per Vertical for falsework structures incorporating suitable bracing. The values apply regardless of the type of formwork supported.

Internal Verticals

Vertical Load (kN)		
Lift(m)	1.8m Bays	2.5 Bays
1.0	57.0	57.0
1.5	55.0	54.0
2.0	40.0	36.0
2.5	26.0	25.0

External Verticals

Bay Length (mm)					
Lift(m)	600	900	1200	1800	2500
1.0	57.0	57.0	57.0	57.0	57.0
1.5	55.5	54.5	53.5	52.0	51.0
2.0	38.0	36.0	34.0	34.0	32.0

ONELOK SUPPORT GUIDE

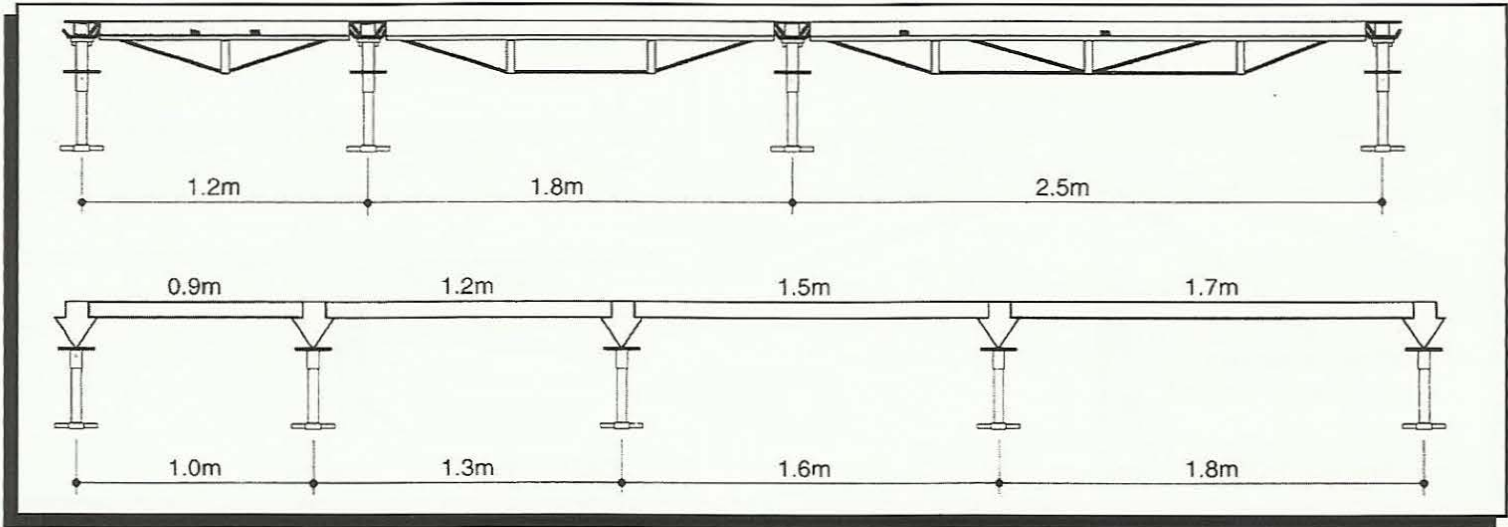
For standards at the beginning and end of a raw, the loading figures for the top and base lifts have to be reduced by 5% except if jack bracing is used. This also applies to the use of Onelok in towers and single bays. at least two lacing levels have to be used on each vertical. When calculating horizontal forces, include for wind forces, the effect of eccentricity, and out of plumb (in accordance with British Standard 5975)

Take care that the structure is stable in the unloaded condition, especially if towers or narrow structures are used.

All Standards should be erected plumb. Horizontal forces should be distributed over all Verticals as evenly as possible.

Sound Footings should be provided to prevent settlement of the Standards.

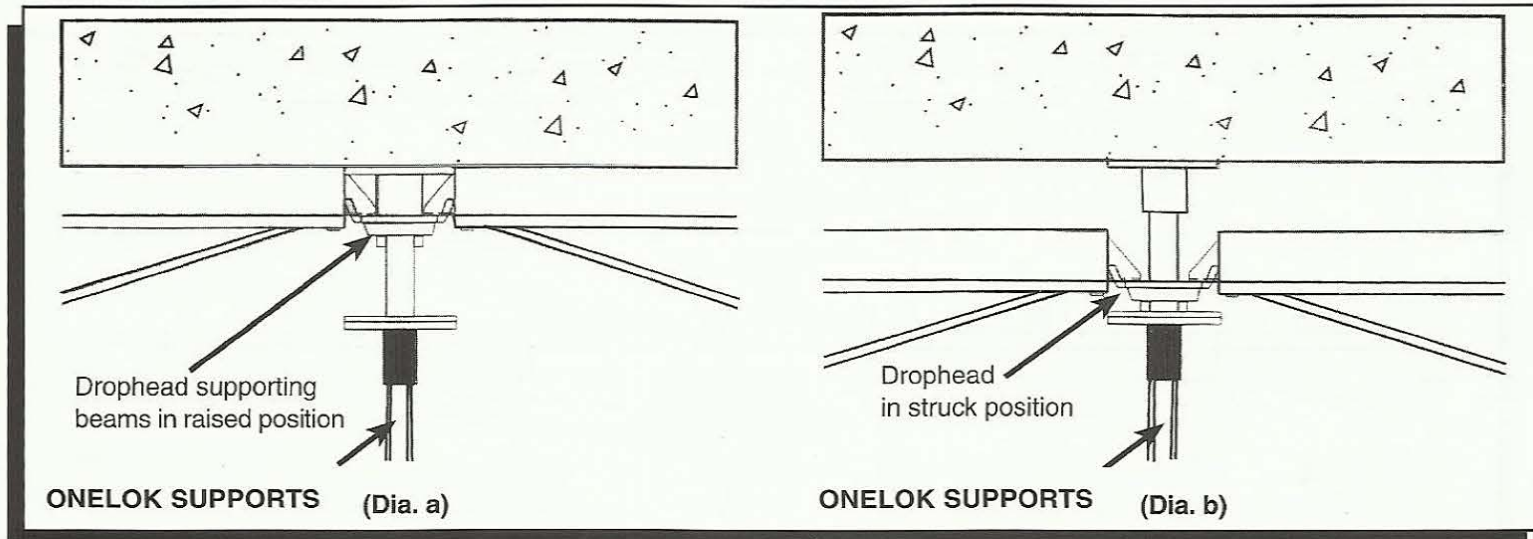
TECHNICAL DATA



Supporting Grids				Supporting Grids											
A 1.8m x 1.8m		C 1.8mx1.3m		E 1.2m x 1.6m		G 1.8m x1.0m		J 2.5m x 1.8m		L 2.5m x 1.3m					
B 1.8m x 1.6m		D 1.2m x 1.8m		F 1.2m x 1.3m		H 1.2m x 1.0m		K 2.5m x 1.6m		F 2.5m x 1.0m					
Grid (mxm)	Slab Thickness (mm)	In Fill Centres (mm)	Grid Area (m)	Leg Load (kN)	Grid (mxm)	Slab Thickness (mm)	In Fill Centres (mm)	Grid Area (m)	Leg Load (kN)	Grid (mxm)	Slab Thickness (mm)	In Fill Centres (mm)	Grid Area (m)	Leg Load (kN)	
Type A	100	610	3.24	14.4	Type G	300	610	1.8	16.6	Infill Beam 1.7m	150	610		21.2	
Beams 1.8m long	160	610		18.4	Infill Beam 0.9m	400	610			25.7	Beams 1.8m long	200	488		30.0
	250	488		22.4	Beams 1.8m long	600	488			34.5		250	488		38.9
	280	488		26.3		700	406					280	488		
				28.7		800	406								
Type B	200	610	2.88	19.9	Type H	600	488	1.2	20.4	Infill Beam 1.5m	250	610		23.0	
Beams 1.8m long	250	610		23.4	Infill Beam 0.9	700	488			25.9	Beams 1.8m long	300	488		28.9
	350	488		30.5	Beams 1.2m long	800	406			31.8		350	488		39.1
	400	406		34.0		900	406					400	406		
	440	406		36.8		1000	348					440	406		
Type C	350	488	2.34	24.75	Type J	150	610	4.50	25.5	Infill Beam 1.2m	400	488		26.6	
Beams 1.8m Long	400	488		27.6	Infill Beam 1.7m	160	610			28.3	Beams 1.8m Long	450	406		31.0
	450	406		30.5	Beams 2.5m Long	175	610			33.8		500	406		37.1
	500	406		33.3		200	488					550	348		
	550	348		36.2		225	488					600	384		
	600	384	39.1		255	488									
Type D	100	610	2.16	10.1	Type K	150	610	4.00	22.7	Infill Beam 1.7m	125	610		27.6	
Beams 1.2m long	125	610		11.5	Infill Beam 1.5m	200	610			32.5	Beams 1.2m long	150	610		35.0
	150	610		12.9	Beams 2.5m long	250	610			37.4		200	488		40.0
	200	488		13.7		275	610					250	610		
	250	488		18.5		300	488					280	488		
	280	488	20.2		320	488									
Type E	200	610	1.92	13.2	Type L	150	610	3.25	18.4	Infill Beam 1.2m	250	610		22.4	
Beams 1.2m long	250	610		15.6	Infill Beam 1.2m	200	610			26.4	Beams 1.2m long	300	610		30.4
	300	488		18.0	Beams 2.5m long	300	610			35.4		350	488		40.0
	350	488		20.3		412	488					400	488		
	400	406		22.7		488						440	406		
	440	406	24.5												
Type F	400	488	1.56	18.4	Type M	200	610	2.5	17.3	Infill Beams 1.2m	450	488		23.4	
Beams 1.2m long	450	488		20.3	Infill Beams 0.9m	300	610			29.5	Beams 1.2m long	500	488		32.6
	500	488		22.2	Beams 2.5m long	400	488			36.6		660	406		40.0
	600	488		26.0		450	488					730	406		
	660	406		28.3		500	488								
	730	406	31.0		560	488									

The above figures are based on the maximum load carrying capacity of the infills, Decking Beams and the 40kN capacity of the Onelok drophead. Leg load calculations are based on concrete density of 24.5KN/M³ and superimposed loads of 2kN/m² including the weight of the formwork.

ADVANTAGE OF EARLY STRIKING



The Technique of Early Striking

Early striking is a technique whereby the formwork is removed 3 to 4 days after pouring a slab, but the supporting structure of scaffolding or props remains undisturbed until the concrete is strong enough to support its own weight over its full span.

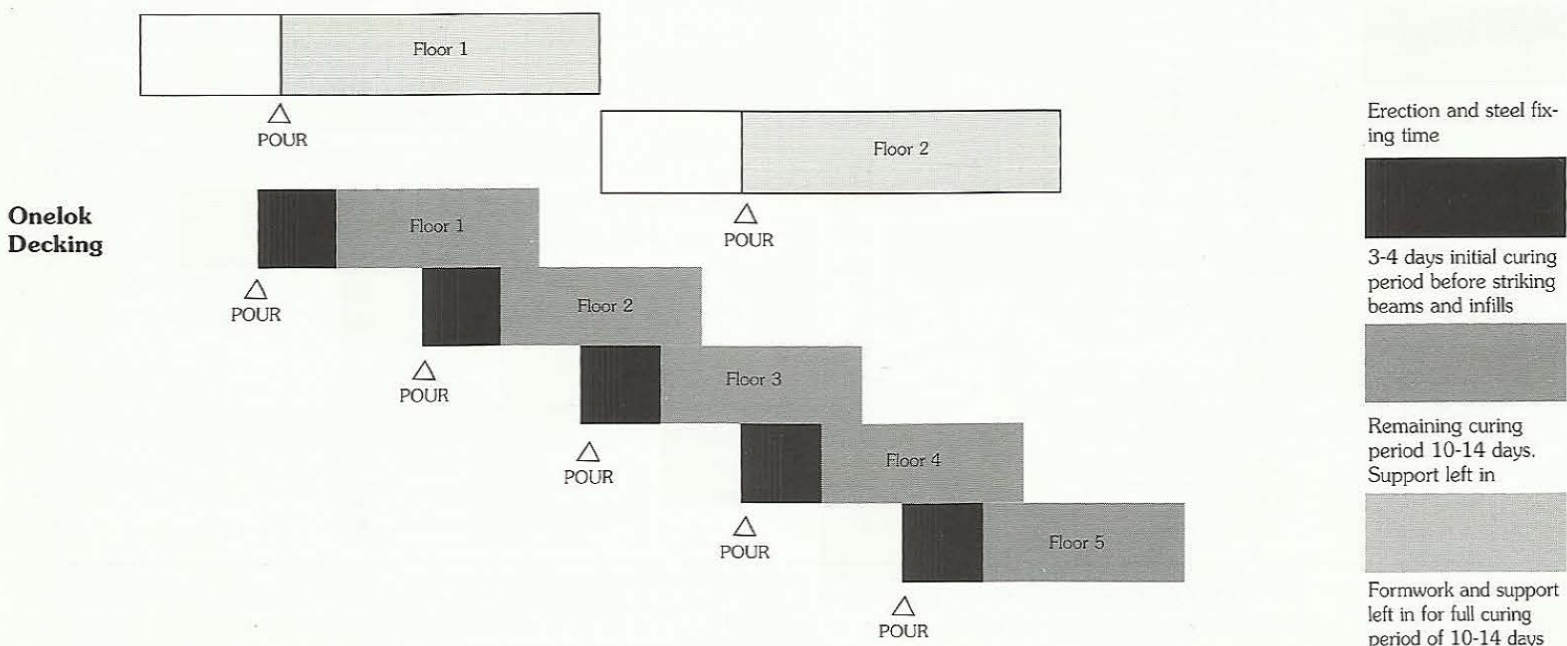
Concrete generally takes 28 days to attain its full constructional design strength. Most engineers will only permit the complete support to be removed after about 10 to 14 days, depending on the ambient temperature and cube strength tests.

With today's high costs of formwork it is important to use it as frequently as possible. Traditional formwork locked in situation for 10 to 14 days with a pouring cycle in excess of this is outmoded by the Onelok early striking system and its facility to speed the cycle of operations. This practice has been widely accepted especially as the rising costs of materials and labour have proved that the early striking is safe, efficient and cost-effective.

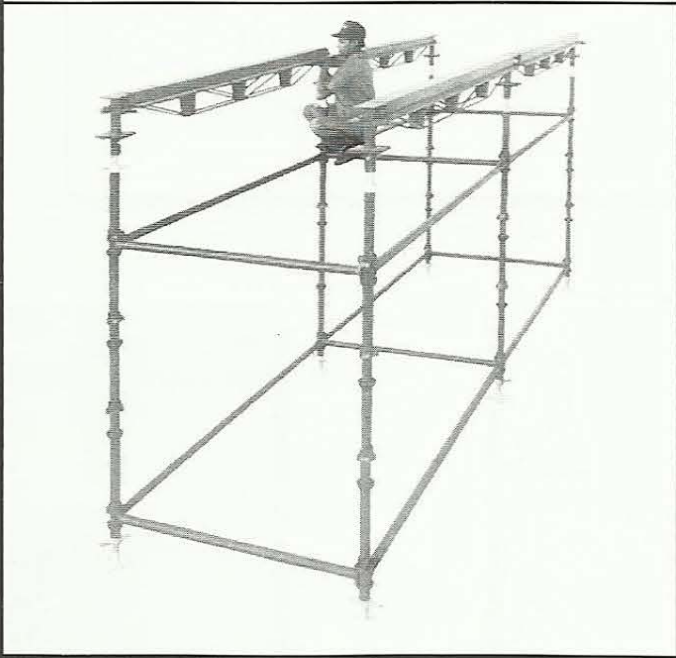
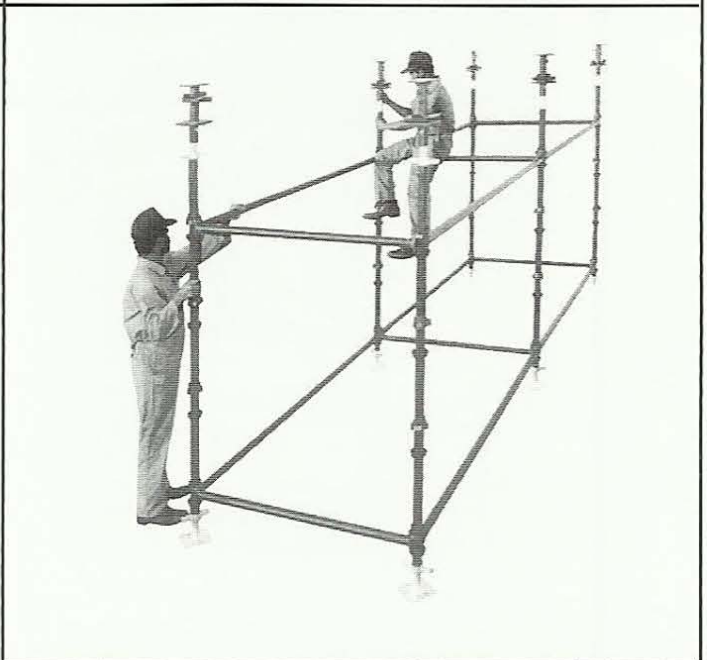
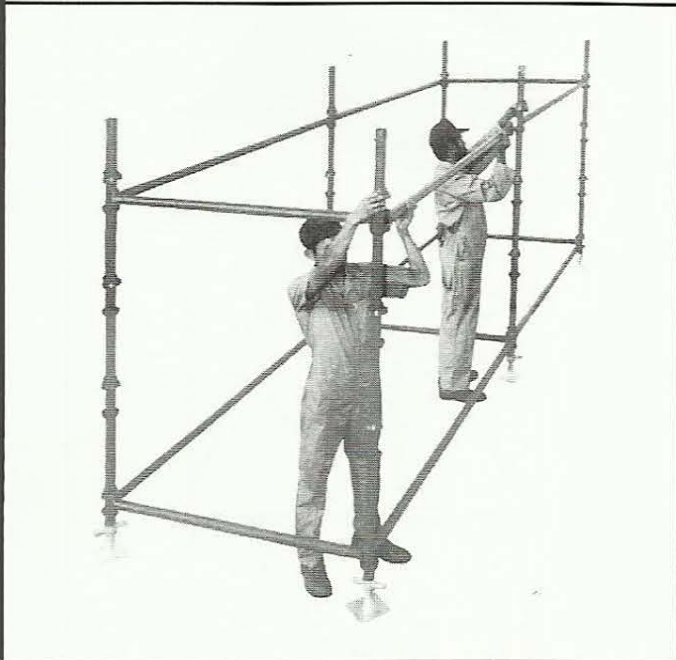
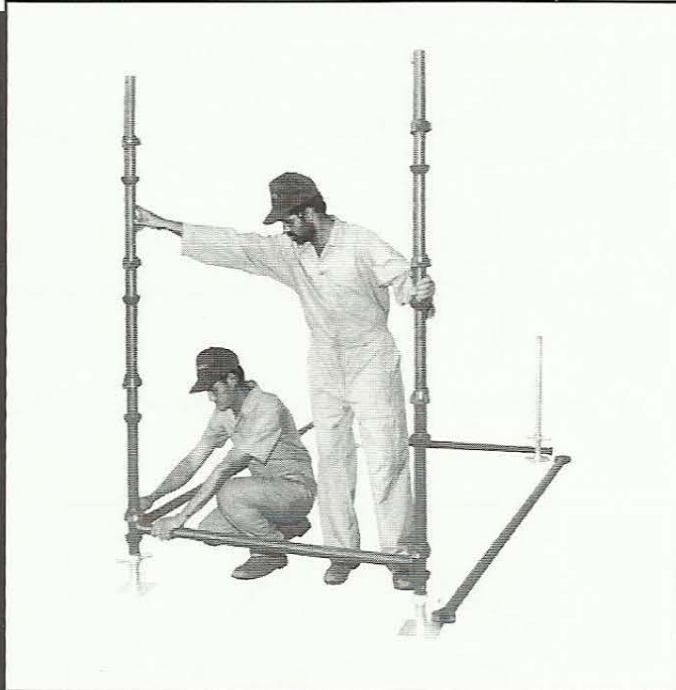
How it is set

A complete set of Onelok decking and support is used for the 1st floor slab. 3 to 4 days after pouring the concrete, the infills and decking beams may be struck for re-use on the 2nd floor slab while the support remains in place during the rest of the curing period. In Practice it is found that supports around columns and close to walls and beams can be removed and this amounts to about 1/3 that are free for re-use. Therefore an approximate additional 2/3 of support will be required for the 2nd floor. 3 to 4 days after pouring the 2nd floor the formwork may be removed.

Traditional formwork



Based on a 7 days cycle it can be seen how Onelok deckings increase output whilst employing less labour more effectively as it is used during curing periods. Therefore less Onelok deckings can be used to



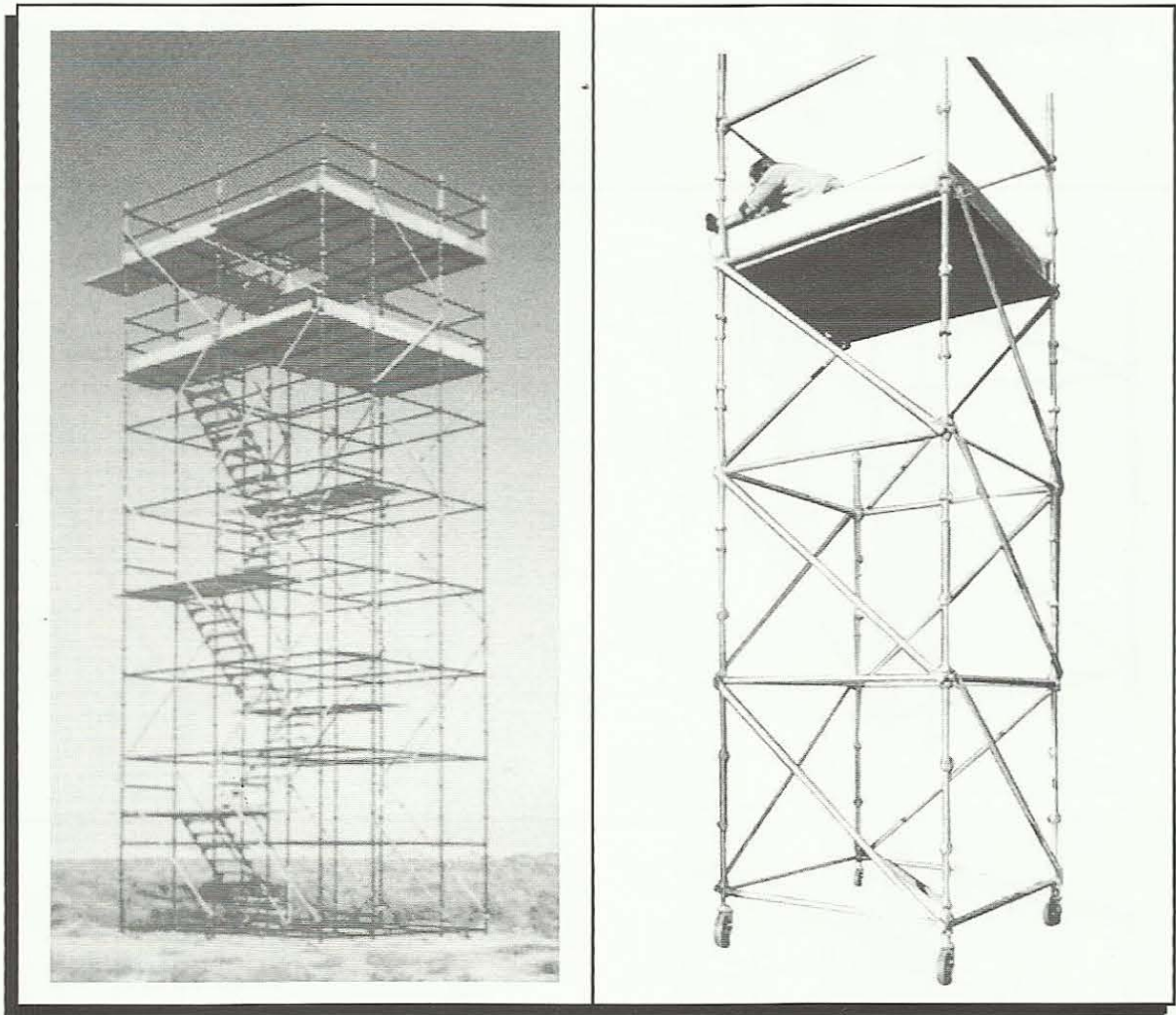
STEEL STATIONARY & MOBILE TOWERS

The Onelok system can easily be adapted to form mobile and stationary access towers using standard components with scaffold boards and castor wheels. Towers should be fully braced on each face using system braces or tubes and fittings. The maximum SWL on all onelok towers is 10 KN.

Access to the working platform should always be made from inside the tower by means of a pole or aluminium ladder or through purpose built stairways

The maximum height of a free standing tower used in an enclosed area must not exceed $3\frac{1}{2}$ times the smallest base dimension. External free standing towers must not exceed 3 times the smallest base dimension.

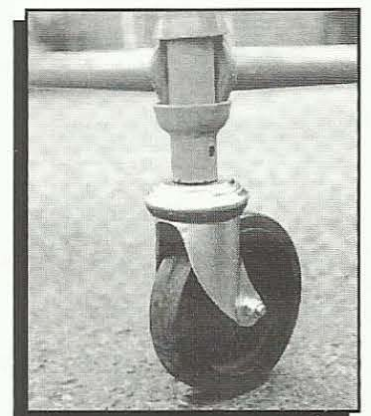
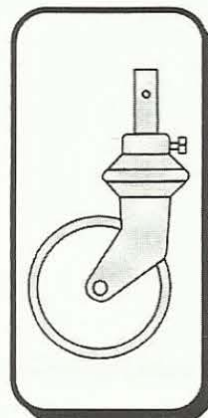
If rubber tyred castors are used the maximum height of the working platform is 5m on a 2.5m square base.



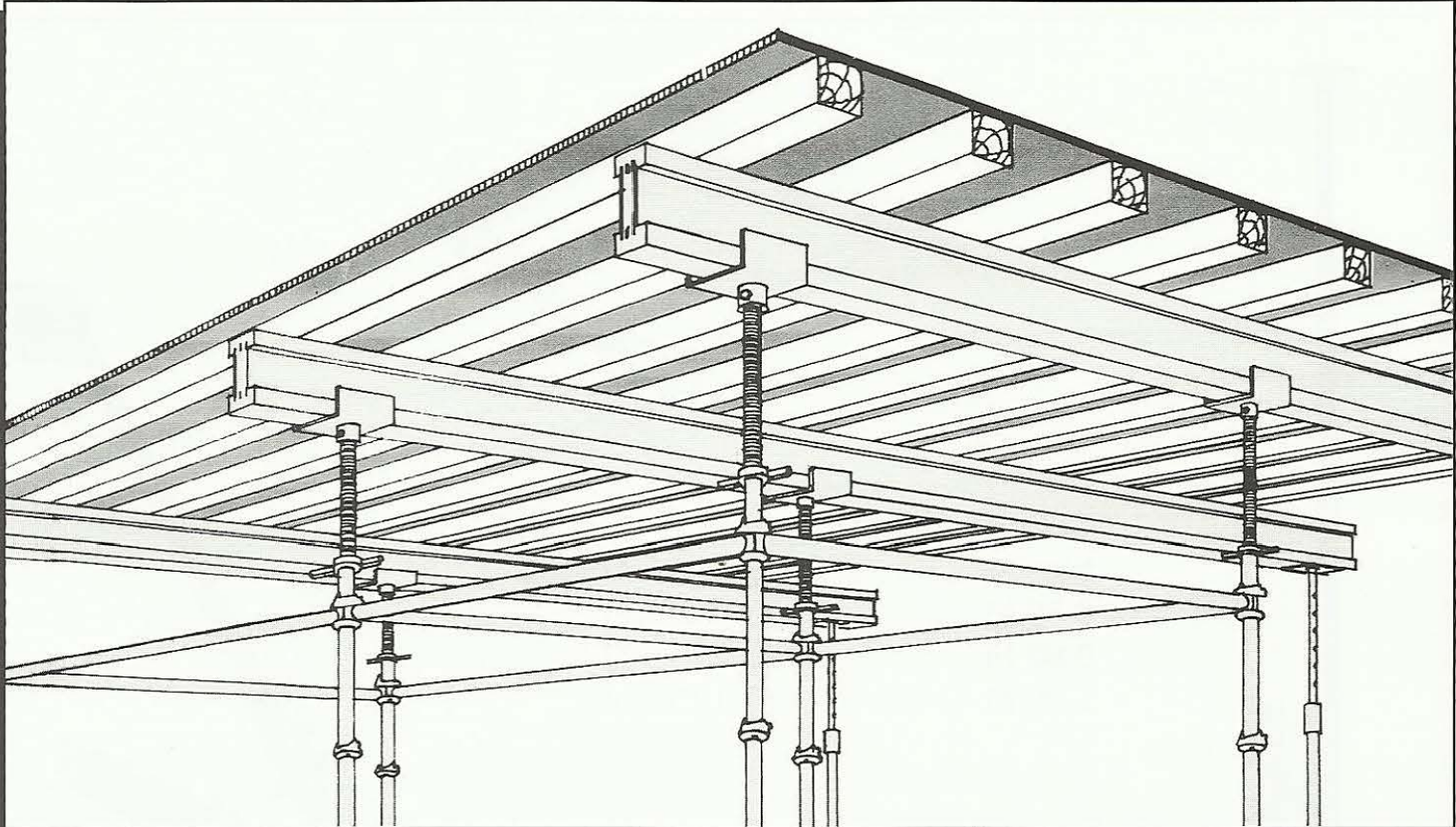
Castor Wheels

CASTOR Wheels must be secured on the bottom of the verticals and locked to prevent rolling. towers must not be moved whilst supporting men or materials.

Tyre	Weight	SWL
Steel	7.0 kg	730 kg
Rubber	6.7 kg	270 kg

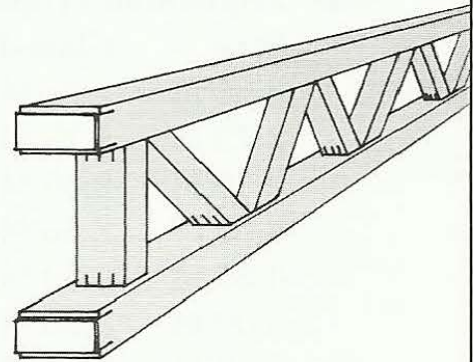
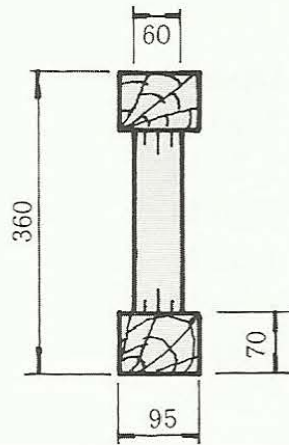


TIMBER BEAM & U-HEAD (DECKING) ONELOK SYSTEM (SUPPORT)



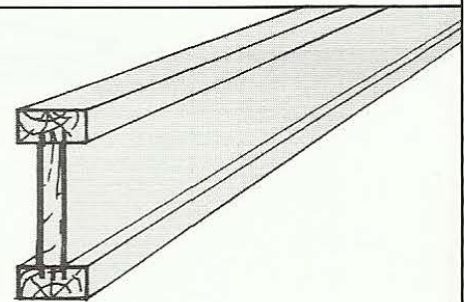
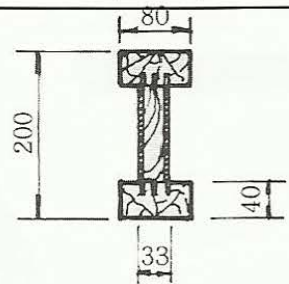
H-36 TIMBER BEAM

BENDING MOMENT PERM $M=16\text{KNM}$
 MAX. PERM. SHEAR 23.0KN
 AVE. MOMENT OF INERTIA $JX=27500\text{CM}^4$
 WEIGHT G: 8KGS/M



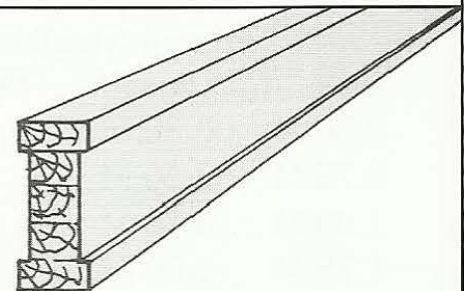
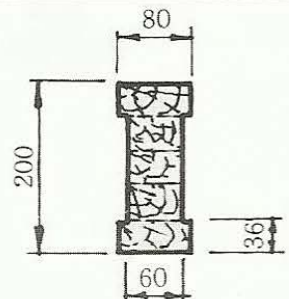
H-20 TIMBER BEAM

BENDING MOMENT PERM. $M=5.0\text{KNM}$
 MAX. PERM. SHEAR 11KN
 AVE. MOMENT OF INERTIA $JX=4380\text{CM}^4$
 WEIGHT G: 5.5KGS/M

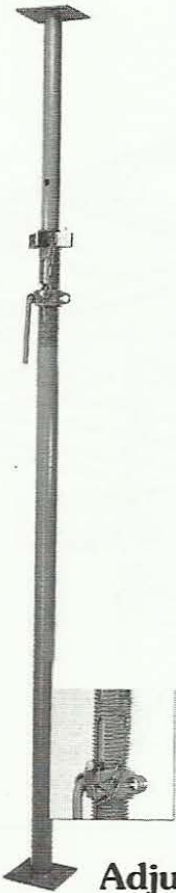


H-20 TIMBER BEAM

BENDING MOMENT PERM. $M=5.5\text{KNM}$
 MAX. PERM. SHEAR 10.0KN
 AVE. MOMENT OF INERTIA $JX=5000\text{CM}^4$
 WEIGHT G: 6.7KGS/M

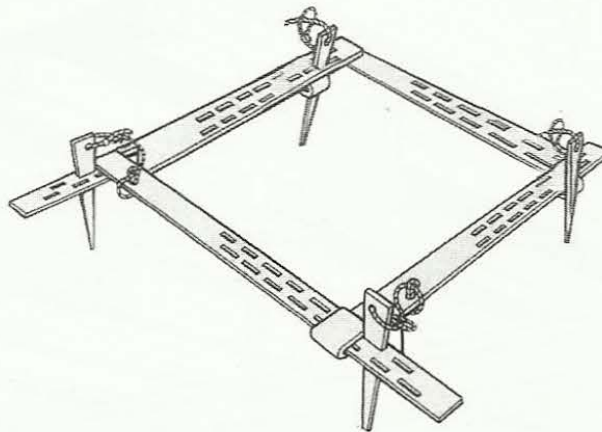


OTHER FORMWORK PRODUCTS



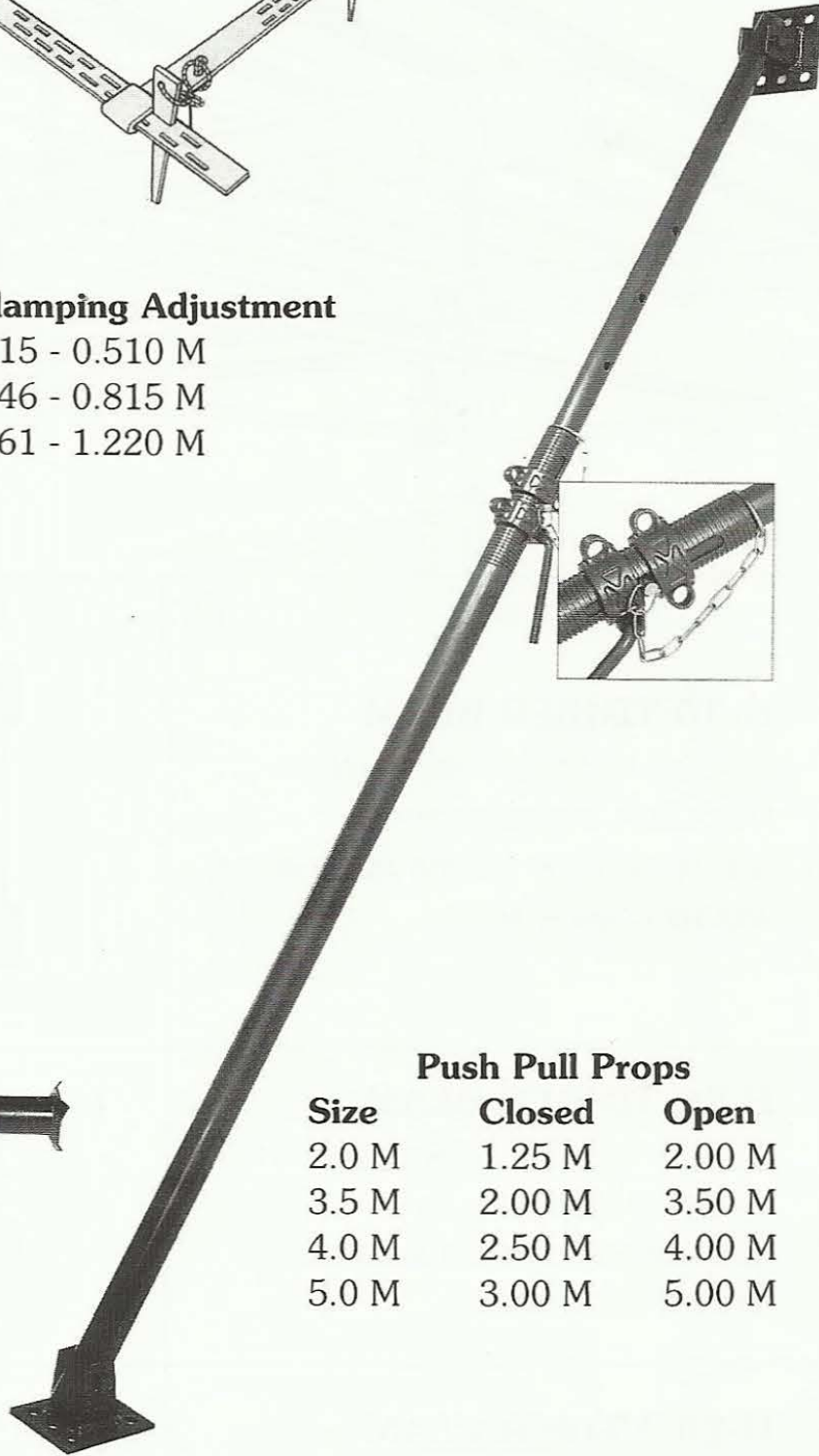
Adjustable Props

Size	Closed	Open
2.00 M	1.25 M	2.00 M
2.75 M	1.75 M	2.75 M
3.50 M	2.00 M	3.50 M
4.00 M	2.50 M	4.00 M
4.50 M	2.50 M	4.50 M
5.00 M	3.25 M	5.00 M
5.50 M	3.25 M	5.50 M



Column Clamps

Size	Clamping Adjustment
0.50 M	0.15 - 0.510 M
0.80 M	0.46 - 0.815 M
1.20 M	0.61 - 1.220 M



Push Pull Props

Size	Closed	Open
2.0 M	1.25 M	2.00 M
3.5 M	2.00 M	3.50 M
4.0 M	2.50 M	4.00 M
5.0 M	3.00 M	5.00 M

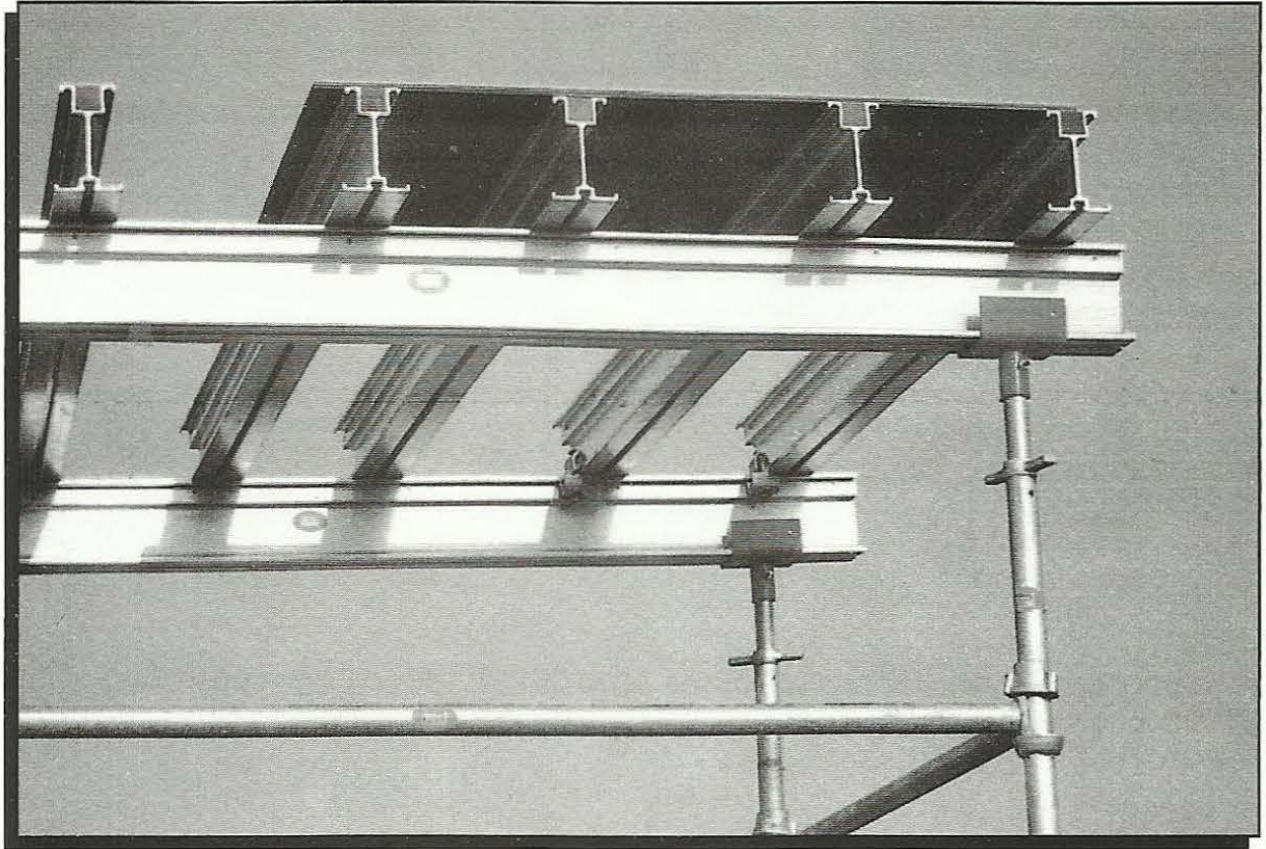


Trench Struts

Size	Closed	Open
0.50 M	0.30 M	0.50 M
0.75 M	0.50 M	0.75 M
1.00 M	0.75 M	1.00 M
1.75 M	1.00 M	1.75 M

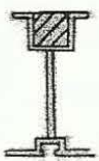
ALUMINIUM BEAMS

USE ON PROPS OR SCAFFOLDING



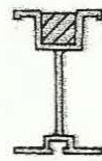
STRONG, LIGHTWEIGHT, ECONOMICAL
VIRTUALLY ELIMINATES TIMBER FROM FORMWORK
REDUCES WASTE
REDUCES SITE LABOUR COSTS

K 6 BEAM



BENDING MOMENT EXCEEDS 6 KNM
SIZE 150 X 80 MM
WEIGHT ONLY 3.83 KG / M
STANDARD LENGTHS UP TO 7 METERS

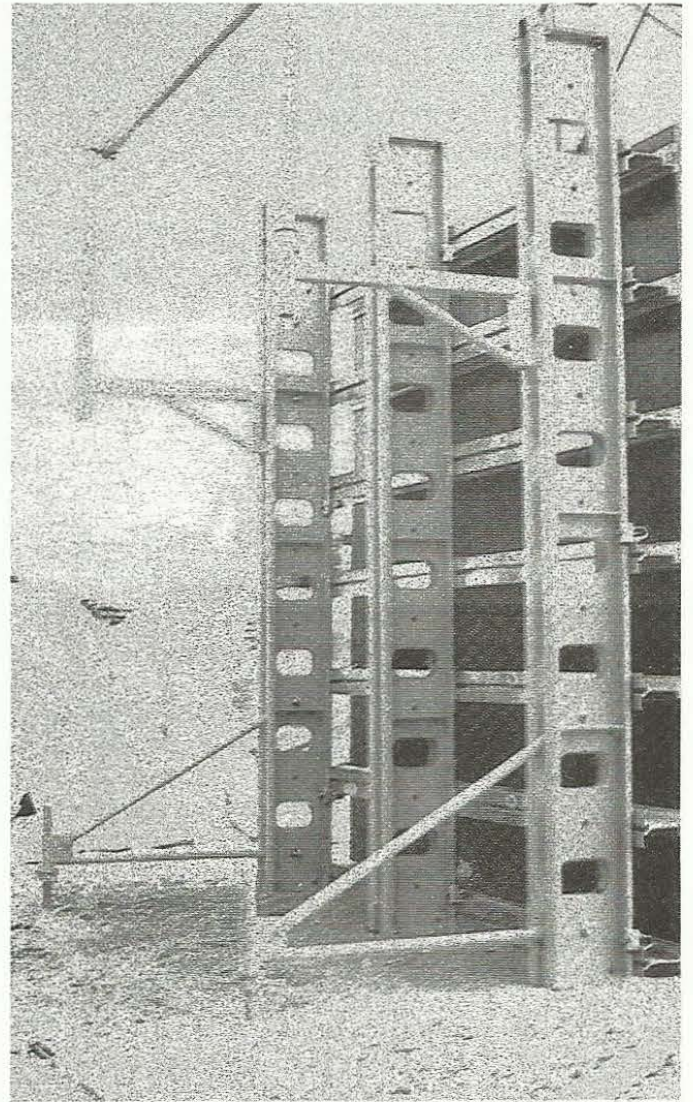
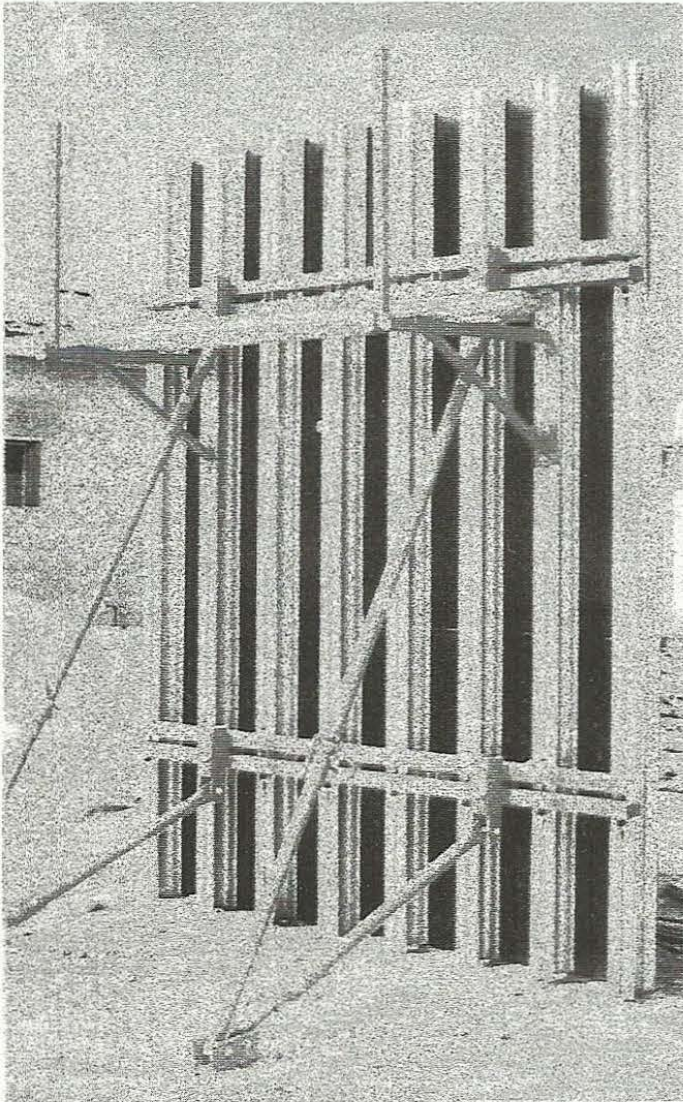
K 12 BEAM



BENDING MOMENT EXCEEDS 6 KNM
SIZE 165 X 95 MM
WEIGHT ONLY 4.75 KG / M
(DESIGNED AND PRODUCED IN GCC)

ALUMINIUM BEAMS

FOR WALLS & COLUMNS
USE WITH STEEL SOLDIERS OR WALERS



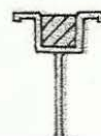
STRONG, LIGHTWEIGHT, ECONOMICAL
VIRTUALLY ELIMINATES TIMBER FROM FORMWORK
AVAILABLE IN 2 STANDARD PROFILES

K 6 BEAM



BENDING MOMENT EXCEEDS 6 KNM
SIZE 150 X 80 MM
WEIGHT ONLY 3.83 KG / M
STANDARD LENGTHS UP TO 7 METERS

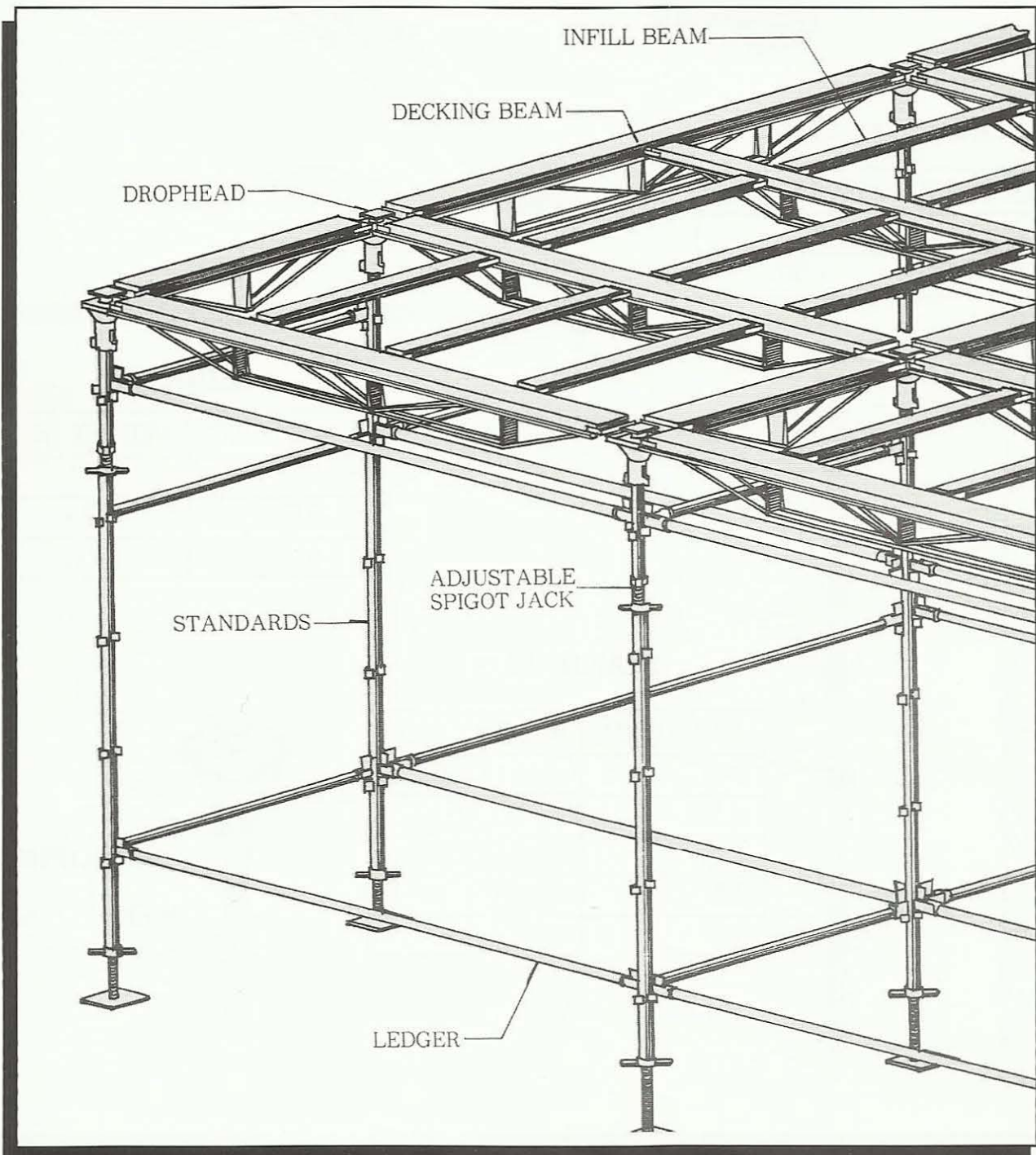
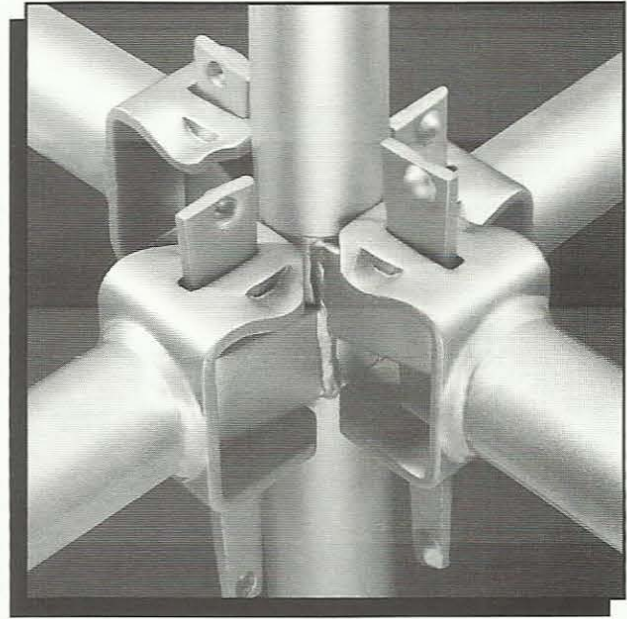
K 12 BEAM



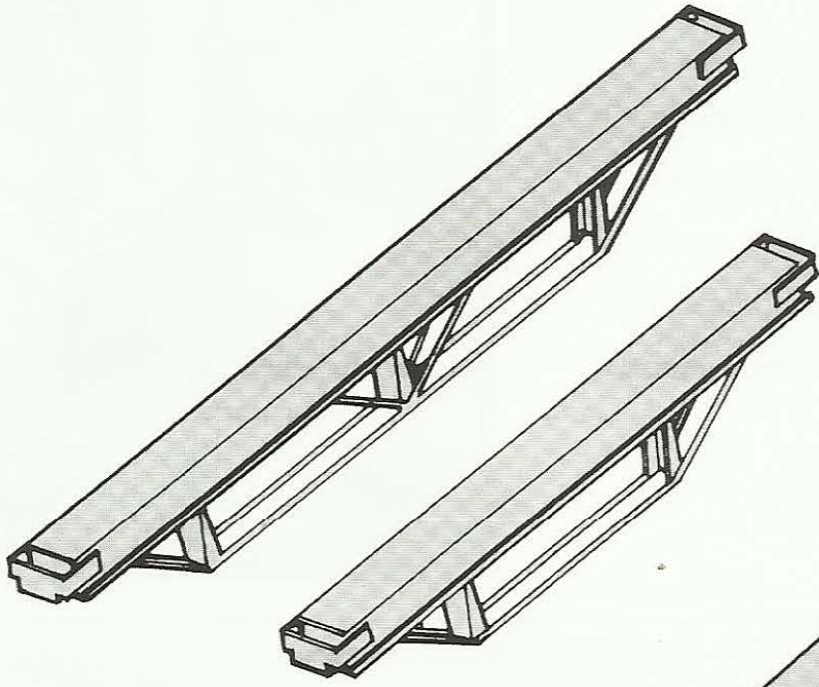
BENDING MOMENT EXCEEDS 6 KNM
SIZE 165 X 95 MM
WEIGHT ONLY 4.75 KG / M
(DESIGNED AND PRODUCED IN G.O.)

FORLOK ACCESS, SUPPORT & DECKING SYSTEMS

The Forlok system replaces the primary & Secondary timbers in soffit support and provides a flat support grid for decking out with plywood or other suitable materials, labor costs are greatly reduced in conjunction with the speed of construction to provide an economical solution to decking problems.



STANDARD COMPONENTS

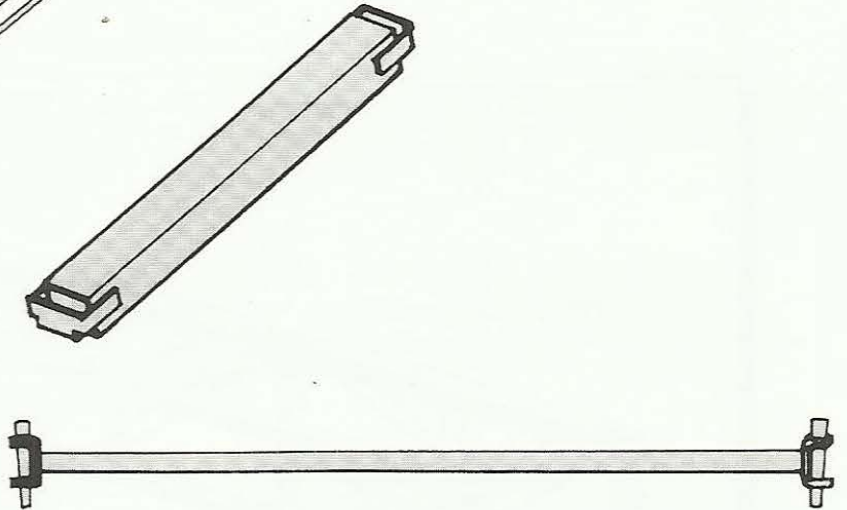


DECKING BEAMS

LENGTH (FT.)	WEIGHT (KG)
8' - 0"	21.50
6' - 0"	7.78
4' - 0"	5.64

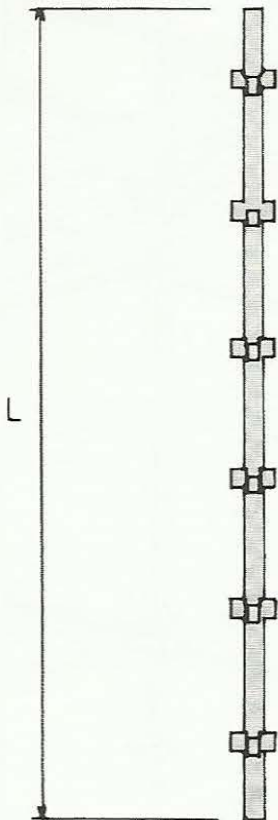
INFILL BEAMS

LENGTH (FT.)	WEIGHT (KG)
6' - 0"	9.75
4' - 0"	6.50



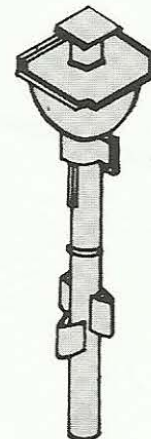
LEDGERS

LENGTH (FT.)	WEIGHT (KG)
8' - 0"	9.91
6' - 0"	7.78
4' - 0"	5.64



STANDARDS

LENGTH (M)	WEIGHT (KG.)
3.0	14.94
2.5	1.45
2.0	9.96
1.5	7.47
1.0	4.98



DROPHEAD

WEIGHT : 5.50 KG.

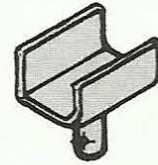
STANDARD COMPONENTS



PLAIN BASE PLATE
WEIGHT : 0.95 KG.



SOCKET BASE
WEIGHT : 1.40 KG



FORKHEAD



SPIGOT JACK
WEIGHT: 4.0 KG

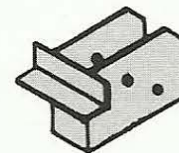
150 x 170	Weight:5.49 Kg.
150 x 110	Weight: 4.99 Kg.



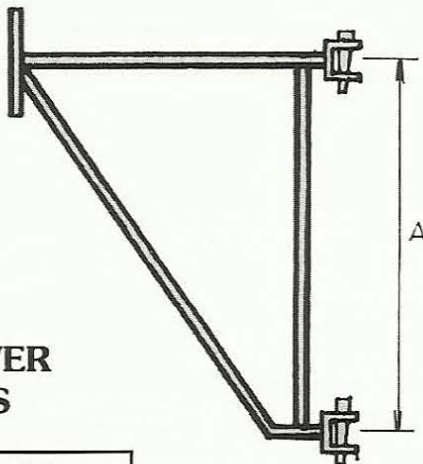
SPIGOT
WEIGHT: 0.94 KG



UNIVERSAL JACK
WEIGHT: 3.9 KG.



INFILL BEAM SHOE
WEIGHT: 2.7 KG

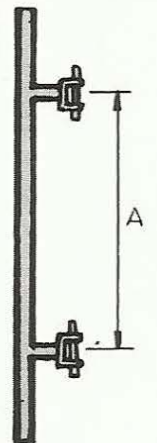


**CANTILEVER
FRAMES**

A(M)	Weight: Kg.
1.50	20.50
1.00	18.50

BEAM BRACKETS

A(M)	Weight: Kg.
1.00	6.60



Permissible Loads on Base Components

Vertical Axial Load up to 57kN.

The loadings will vary according to the horizontal loads taken into account and the actual extension of the jack required

760mm Universal Jack



Permissible Loads on Verticals (in Falsework Structures only)

The tables below show the permissible loads per Vertical for falsework structures incorporating suitable bracing. The values apply regardless of the type of formwork supported. However, permissible loads can be influenced by a number of factors. If in Doubt, reference should be made to the Design Office.

Onelok Support - Guide

At least two lacing levels have to be used on each Vertical. When calculating Horizontal forces, include for wind forces, the effect of eccentricity, and out of plumb (in accordance with British Standard 5975).

Take care that the structure is stable in the unloaded condition, especially if towers or narrow structures are used. All verticals should be erected plumb.

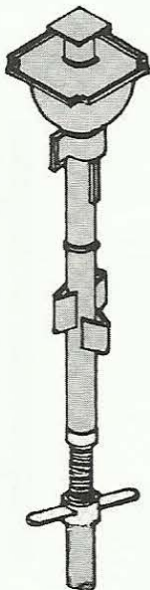
Horizontal forces should be distributed over all verticals as evenly as possible.

Sound footings should be provided to prevent settlement of the verticals.

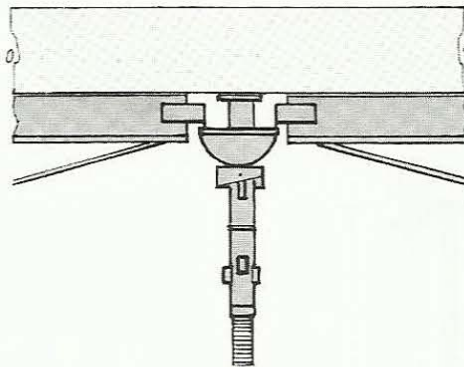
Internal Verticals

VERTICAL LOAD (KN)	
Lift (M)	
1.0	57.0
1.5	40.0
2.0	27.5

Early Striking

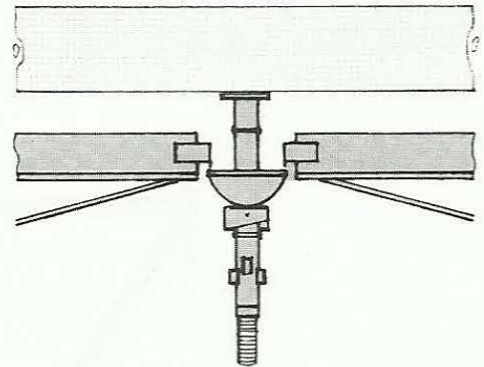


Before Striking



Drophead supporting beams in raised position.

After Striking



Drophead in struck Position.

Early striking is a technique whereby the formwork is removed 3 to 4 days after pouring the slabs but with the supporting structure of Scaffold remaining undisturbed for the full curing period.

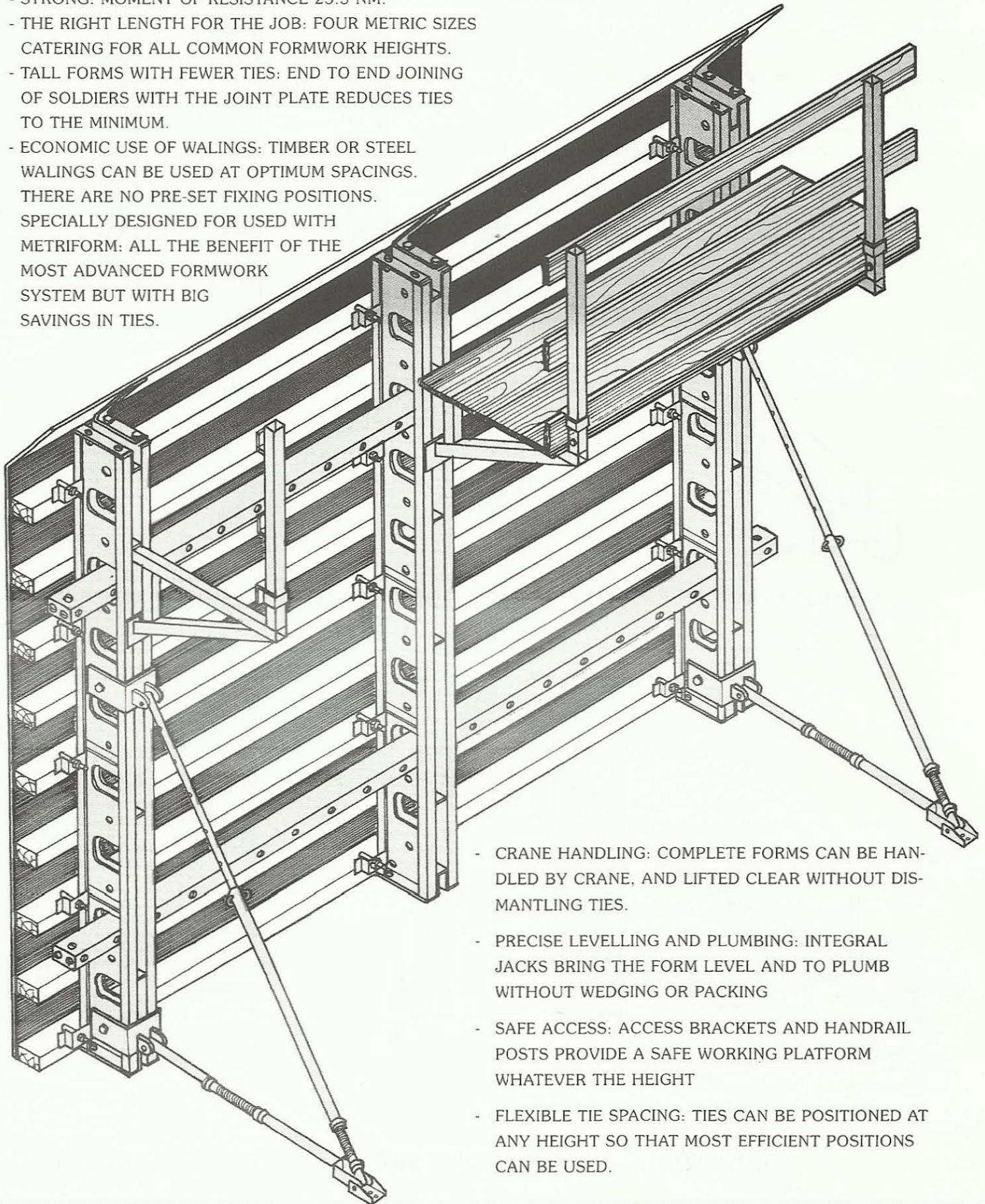
After striking, the primary beams, the infill beams and the plywood can be easily removed and re-used on the next area of Scaffold. The drop-head remains at all times in contact with the underside of the slab ensuring proper support at all times.

The Drophead has a safe load carrying capacity of **40 kN**

WALL FORMWORK STEEL SOLDIER SYSTEM

THE GENERAL PURPOSE WALL SUPPORT SYSTEM COMBINING HIGH PERFORMANCE WITH SIMPLE, RAPID ASSEMBLY
GREAT VERSATILITY AND MAJOR COST ADVANTAGES.
THE STEEL SOLDIER SYSTEM PROVIDES MAXIMUM BENEFITS WHEN USED WITH HEAVY DUTY TIES AND STEEL WALINGS.

- STRONG: MOMENT OF RESISTANCE 25.5 NM.
- THE RIGHT LENGTH FOR THE JOB: FOUR METRIC SIZES CATERING FOR ALL COMMON FORMWORK HEIGHTS.
- TALL FORMS WITH FEWER TIES: END TO END JOINING OF SOLDIERS WITH THE JOINT PLATE REDUCES TIES TO THE MINIMUM.
- ECONOMIC USE OF WALINGS: TIMBER OR STEEL WALINGS CAN BE USED AT OPTIMUM SPACINGS. THERE ARE NO PRE-SET FIXING POSITIONS. SPECIALLY DESIGNED FOR USE WITH METRIFORM: ALL THE BENEFIT OF THE MOST ADVANCED FORMWORK SYSTEM BUT WITH BIG SAVINGS IN TIES.

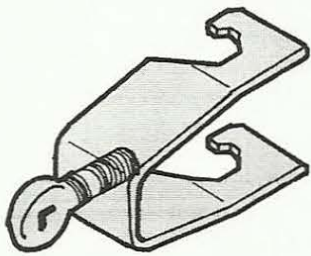
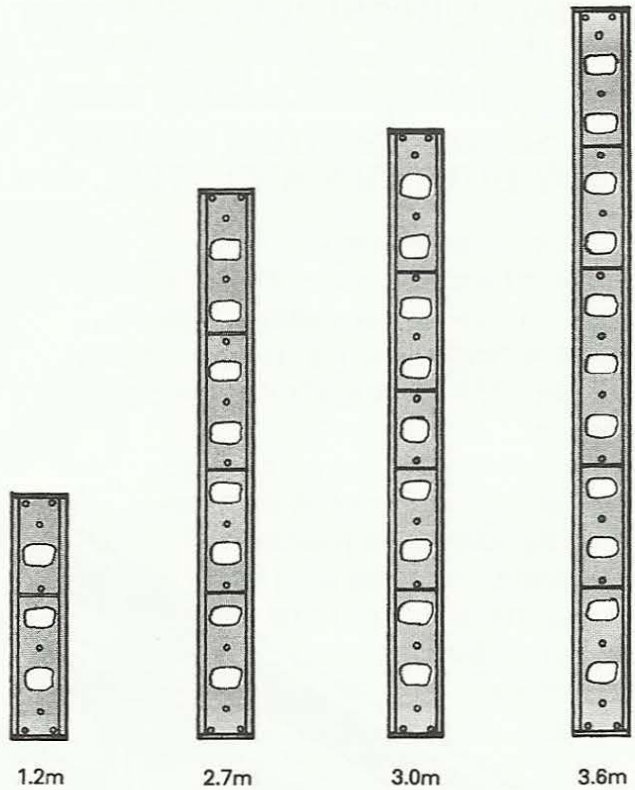


- CRANE HANDLING: COMPLETE FORMS CAN BE HANDLED BY CRANE, AND LIFTED CLEAR WITHOUT DISMANTLING TIES.
- PRECISE LEVELLING AND PLUMBING: INTEGRAL JACKS BRING THE FORM LEVEL AND TO PLUMB WITHOUT WEDGING OR PACKING
- SAFE ACCESS: ACCESS BRACKETS AND HANDRAIL POSTS PROVIDE A SAFE WORKING PLATFORM WHATEVER THE HEIGHT
- FLEXIBLE TIE SPACING: TIES CAN BE POSITIONED AT ANY HEIGHT SO THAT MOST EFFICIENT POSITIONS CAN BE USED.

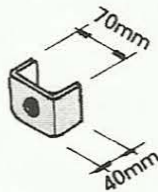
STEEL SOLDIER SYSTEM

GENERAL PURPOSE SUPPORT SYSTEM FOR VERTICAL FORMWORK COMPLETE WITH A WIDE RANGE OF CAREFULLY DESIGN ACCESSORIES.

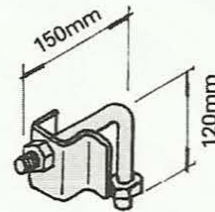
AVAILABLE IN FOUR METRIC SIZES TO CATER FOR ALL COMMON FORMWORK HEIGHTS. A HOST OF SPECIAL FEATURES MAKE IT THE MOST ADVANCED AND VERSATILE SYSTEM OF ITS TYPE.



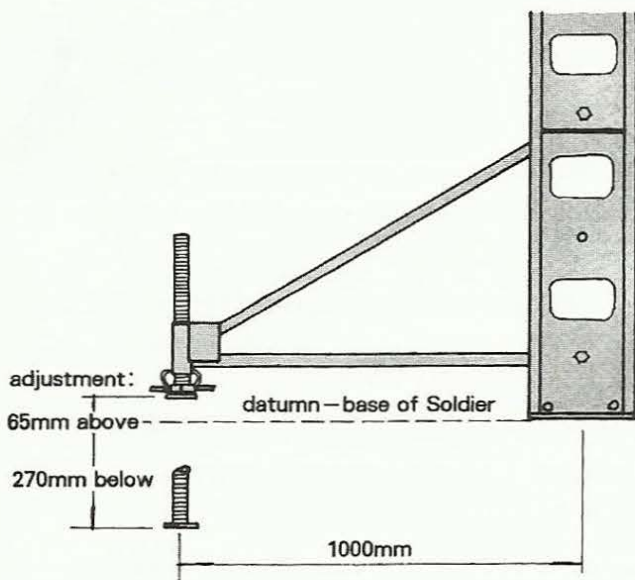
WALING CLIP



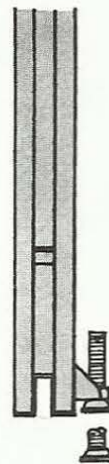
STEEL WALING CLAMP



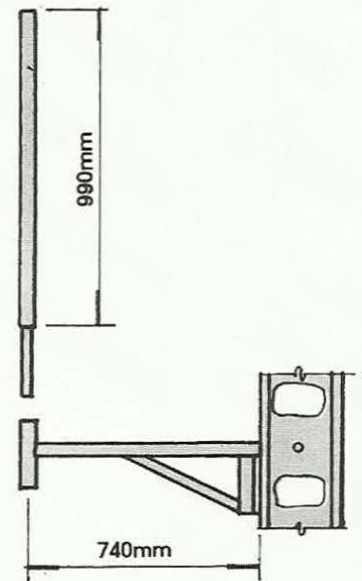
TIMBER WALING CLAMP



STABILIZER

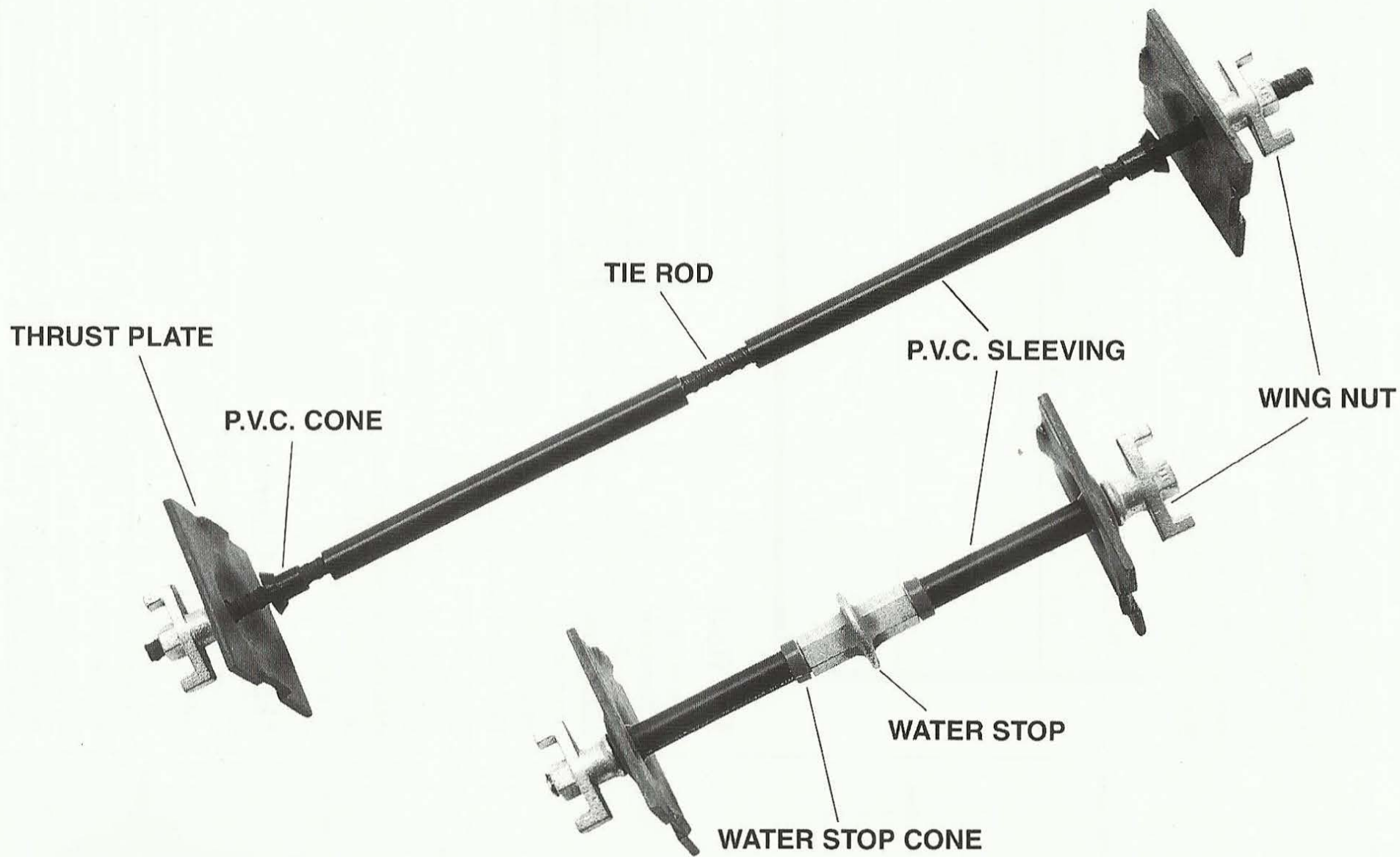


FORM JACK



ACCESS BRACKET

THRU TIE SYSTEM



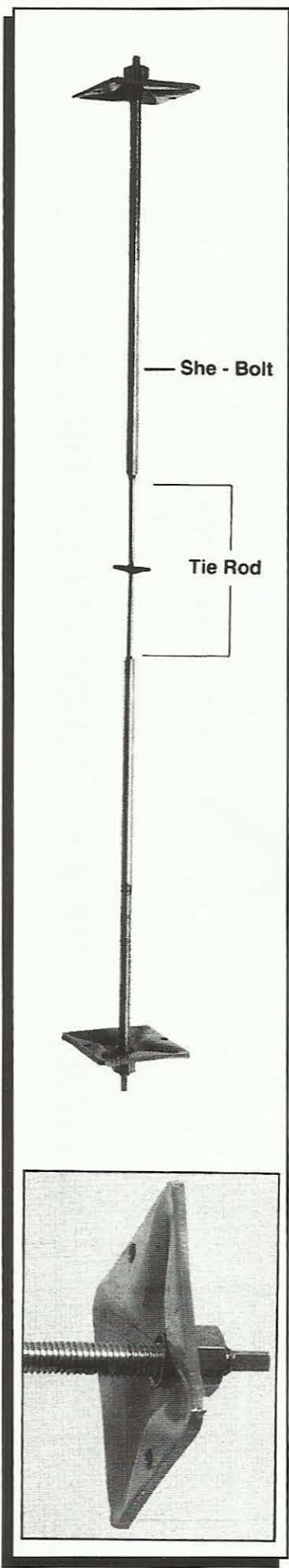
ASSEMBLY OF WALLFORM ACCESSORIES

SHE - BOLTS

The square head fits standard spanners for efficient removal after use, a task made still easier by the long tapered nose.

A generous length of thread is provided on all Williamsform she-bolts to accommodate wide variations in formwork thickness, thus eliminating the need to stock a large number of different types.

At the heart of the Williamsform system, these are machined from top quality High Tensile steel bar to very high standards. The external thread is a rugged, fast action square thread designed to resist site abuse and assuring no deterioration of safety standards throughout its long life.



Tie Rod Diameter (ins)	She-bolt Diameter (ins)	Taper Length (mm)	Connection into she-bolt (mm)	Standard Length (mm)	Thread length Adjustment (mm)
1/2	3/4	60	30	325	100
				400	150
				500	200
				600	250
				700	300
5/8	1	100	35	400	150
				500	200
				600	250
				700	300

Tie Rods

Manufactured from very high grade steel, Williamsform tie rods have threads specially rolled to ensure the highest possible loading with complete safety, The central crimp in the tie prevents rotation when removing she-bolts.

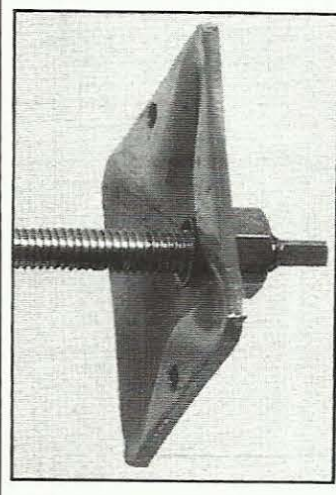
Tie rods are stocked in 25mm increments up to 600mm long, and in 50mm increments up to 1m long. Ties between 1m and 3m long can be supplied to order. Alternatively, ties of any size can be made up by joining suitable lengths using the couplings.

Tie Rod Diameter (ins)	Connection into she-bolt (mm)	Shortest tie (mm)	Shortest crimped tie (mm)
1/2	30	50	100
5/8	35	75	150

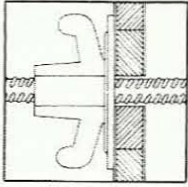
"H" Type Clamps

These robust cast clamps are the most popular choice, suitable for use on steel or timber members.

A special feature is the retained nut which is free to rotate but cannot be lost on site. The large bearing area makes this clamp ideal for use on timber, enabling heavy tie loadings to be safely transferred. If desired, the clamp can be secured to the form using the holes provided. On forms for multiple uses this saves time in erection and eliminates site losses.



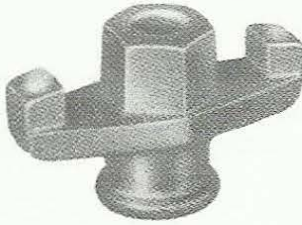
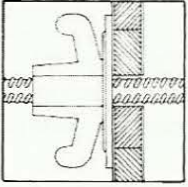
Tie Rod Diameter (ins)	Clamp Reference	Dimensions (mm)
1/2	H3	152 x 127 x 33
5/8	H4	152 x 127 x 38



Tie Rod

A high tensile tie rod with rolled continuous threading allows a variety of applications with a maximum diameter of 15mm and up to 6mtr in length

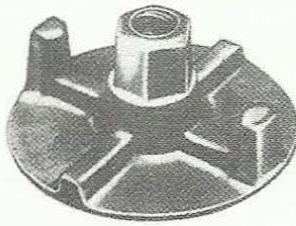
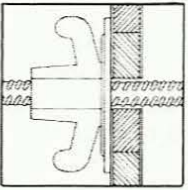
DIA.	Ultimate Load	SWL Recoverable tie	SWL Lost tie
15MM	210 KN	105 KN	156 KN



Wing Nut

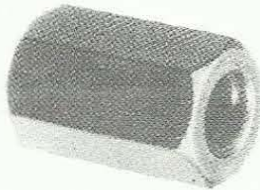
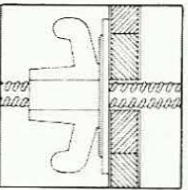
Galvanised Wing Nut for Tie Rods 15mm

Thread	Weight
15mm	0.3 KG



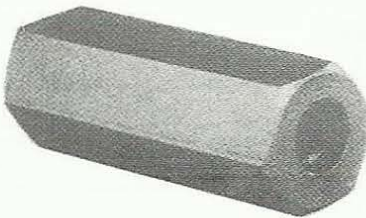
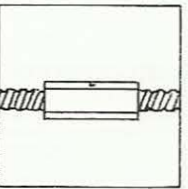
Anchor Nut 100 mm dia.

Galvanised Anchor Nut - Base Diameter 100 mm for Tie Rods of 15 mm Dia



Hexagonal Nuts

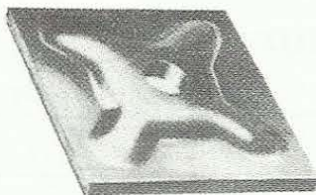
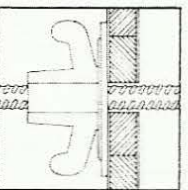
Thread	Length	Weight
15mm	50mm	0.28 Kg



Tie Bar Connector

Hexagonal Nut, Machine Thread with Centre Pin to join two Tie Rods. Black colour

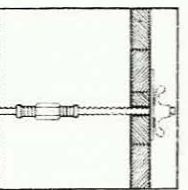
Thread	Length	Weight
15mm	100mm	0.55 Kg



Waler Plate

Reinforced Support Heavy Duty Washer Plate

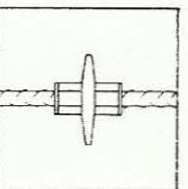
Size	Weight	Finish
150x150mm	1.1 Kg	Plated
120x120mm	0.8 Kg	Plated



Water Barrier

Water stop centre piece with grooves.

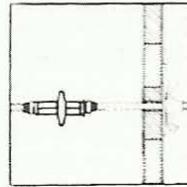
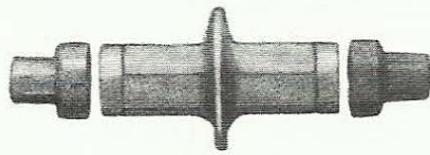
Finish	Thread	Length	Weight
Self Colour	15mm	116mm	0.6 Kg
Galvanised	15mm	116mm	0.6 Kg



Water Barrier with Disc

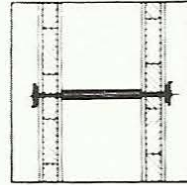
Water Stop which Prevents water seepage due to its centre discs.

Finish	Thread	Length	Weight
Self Colour	15mm	100mm	0.50 Kg
Galvanised	15mm	100mm	0.50 Kg



Water Barrier Reducers

PVC Connectors are used at the ends of water stops to connect to PVC Sleeves of 22mm inner Dia.

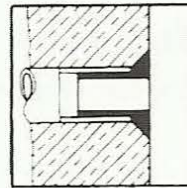
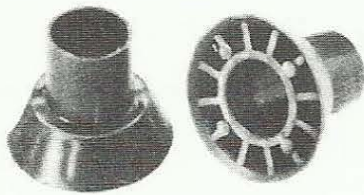


Plastic Sleeve

Rigid PVC tube 3.0 mtr length can be easily cut to the required size. It is used as an expandable sleeve over tie rods, facilitating their removal and also acting as a spacer to ensure correct width of wall.

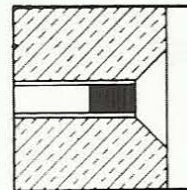
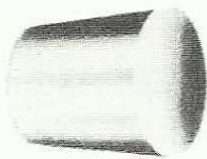
PVC Sleeve

ID 22MM



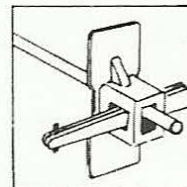
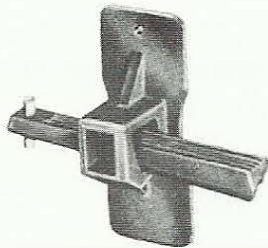
Plastic Cones

PVC Cones are used at the ends of the PVC Sleeves and can be easily extracted after removal of the formwork.



Plastic Plugs

Plastic Plugs for filling redundant holes and closing PVC Sleeves.



Form Clamp

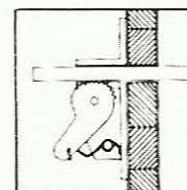
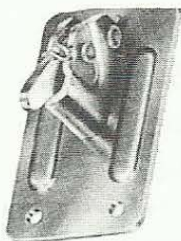
Form clamps are used with tension wire and provide an economical, effective clamping system.

For Steel Diameter

Weight

4 - 10mm

0.42 Kg



Spring Clamp

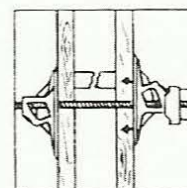
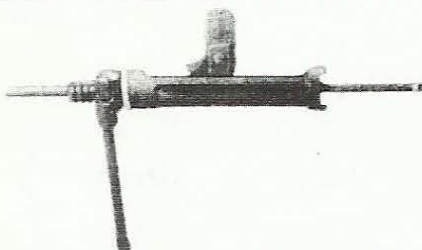
Form work clamps with a spring action clamping system.

For Steel Diameter

Weight

4 - 10mm

0.52 Kg

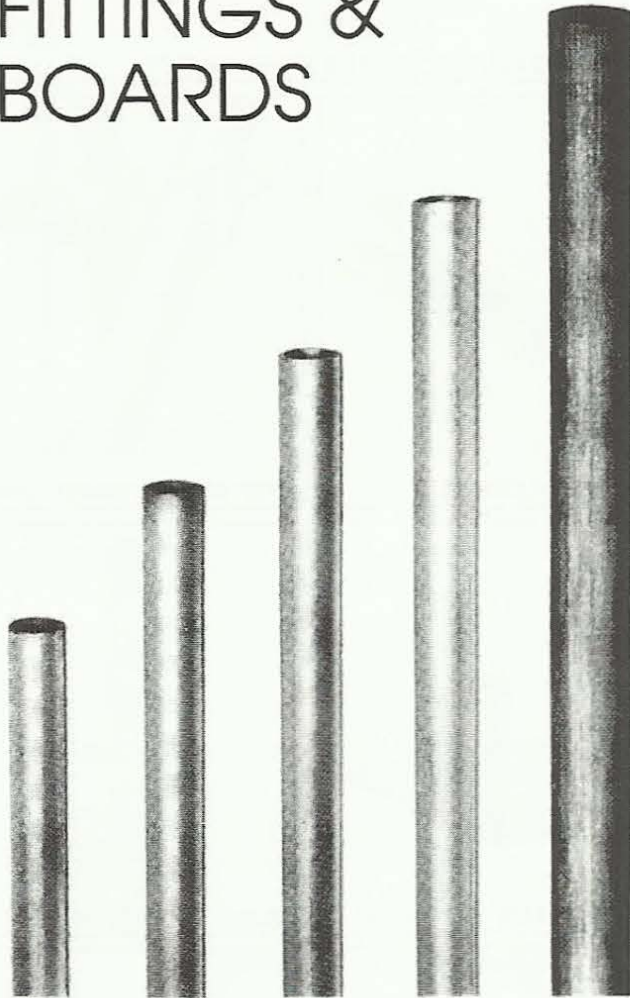


Clamp Tensioner

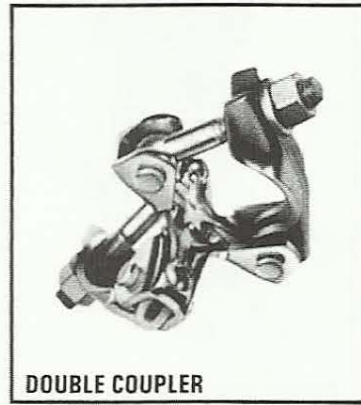
Spindel Tensioner for form clamps

**A Comprehensive Range of Quality Shuttering Accessories
Always Available**

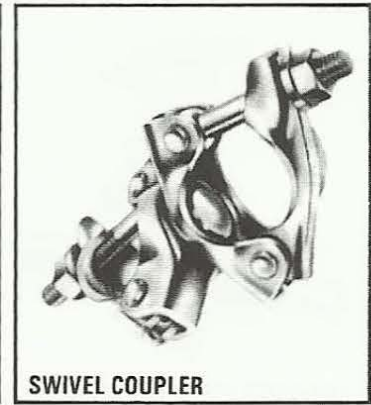
SCAFFOLD TUBES FITTINGS & BOARDS



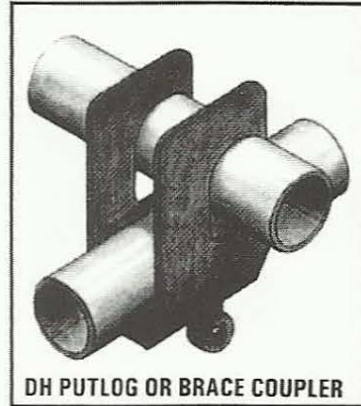
SCAFFOLD TUBES - GALVANISED, ALUMINIUM OR BLACK



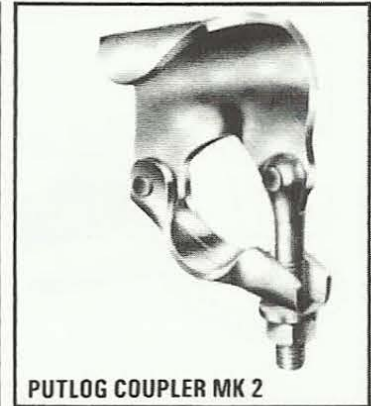
DOUBLE COUPLER



SWIVEL COUPLER



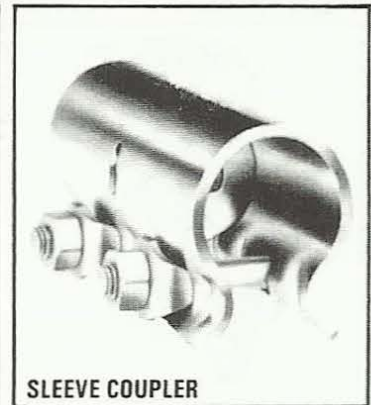
DH PUTLOG OR BRACE COUPLER



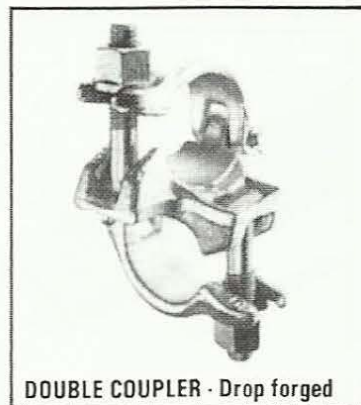
PUTLOG COUPLER MK 2



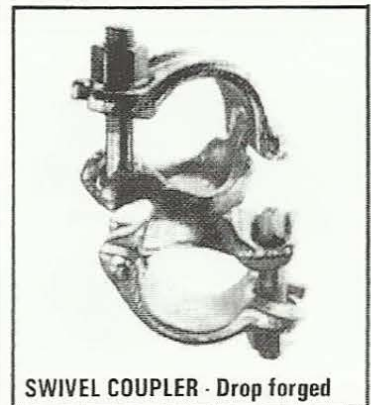
FIXED FINIAL COUPLER



SLEEVE COUPLER



DOUBLE COUPLER - Drop forged



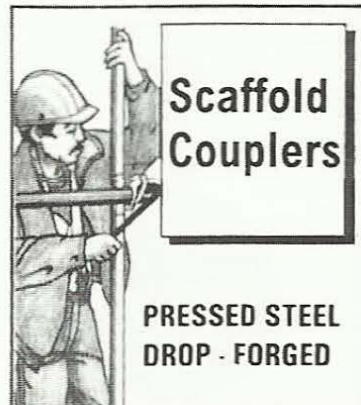
SWIVEL COUPLER - Drop forged

An extensive
range of

**ANCILLARY
EQUIPMENT**

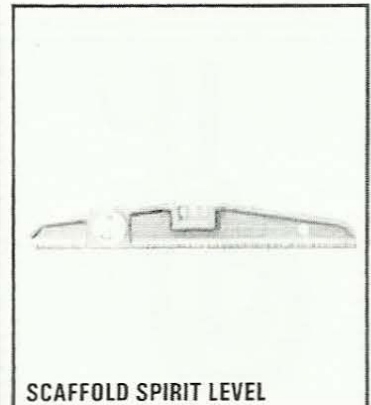
always
available

To BS 1139 part 2



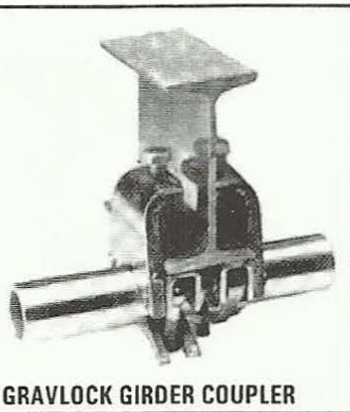
**Scaffold
Couplers**

**PRESSED STEEL
DROP - FORGED**

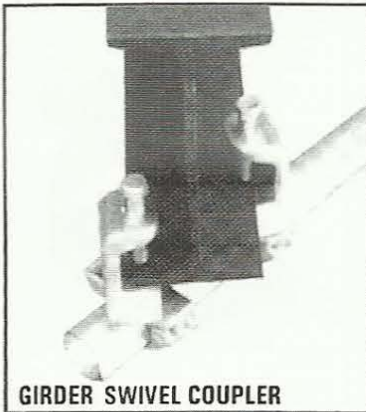


SCAFFOLD SPIRIT LEVEL

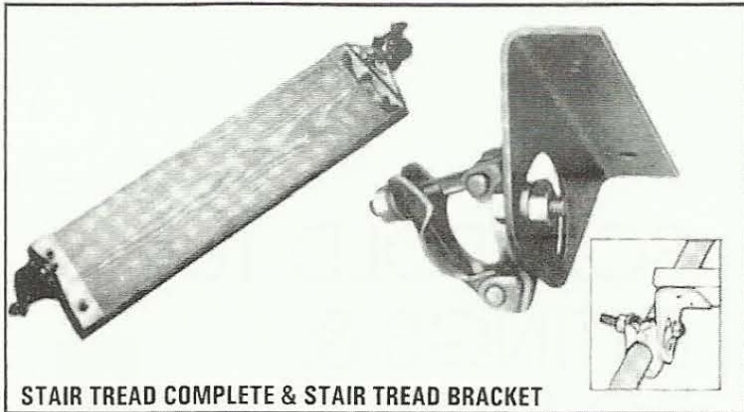
SCAFFOLD TUBES, FITTINGS & BOARDS



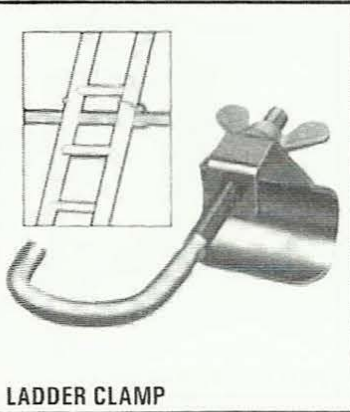
GRAVLOCK GIRDER COUPLER



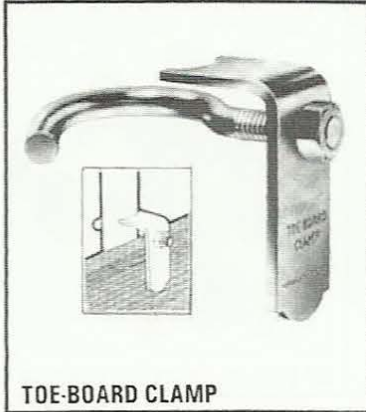
GIRDER SWIVEL COUPLER



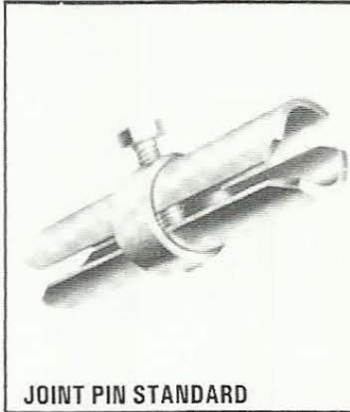
STAIR TREAD COMPLETE & STAIR TREAD BRACKET



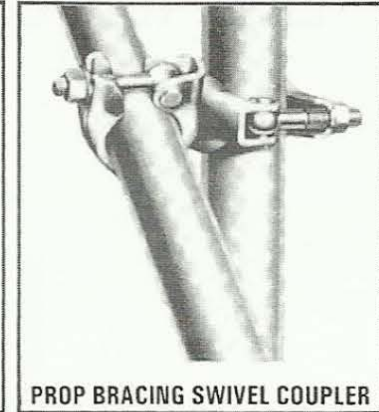
LADDER CLAMP



TOE-BOARD CLAMP



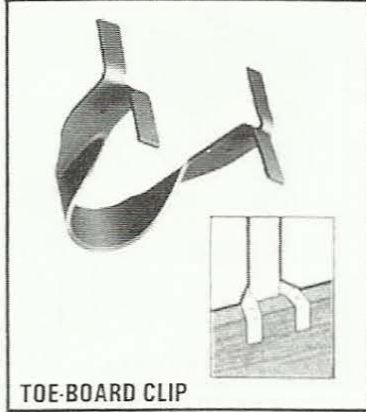
JOINT PIN STANDARD



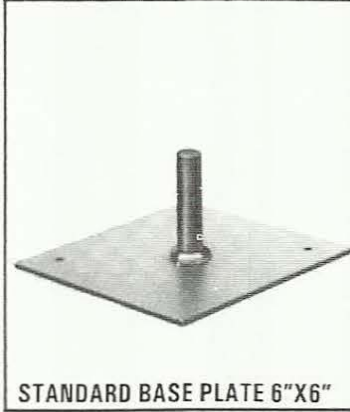
PROP BRACING SWIVEL COUPLER



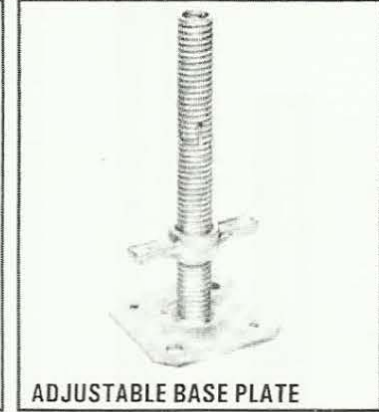
PUTLOG COUPLER - Drop forged



TOE-BOARD CLIP



STANDARD BASE PLATE 6"X6"



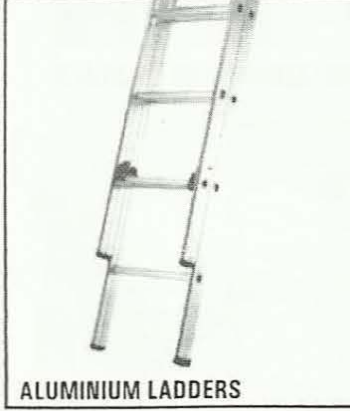
ADJUSTABLE BASE PLATE



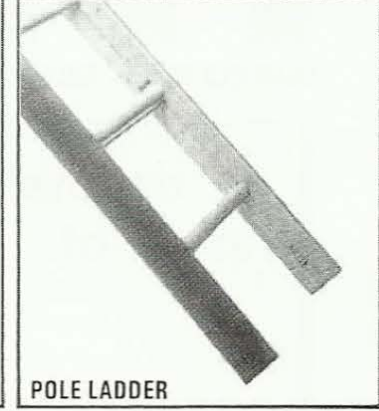
SINGLE COUPLER



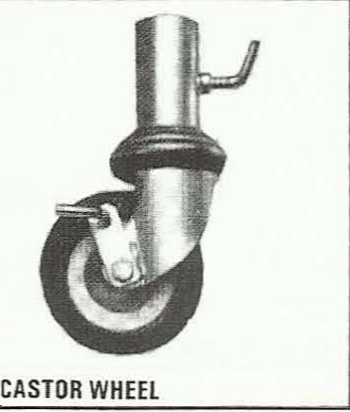
SCAFFOLD BOARD



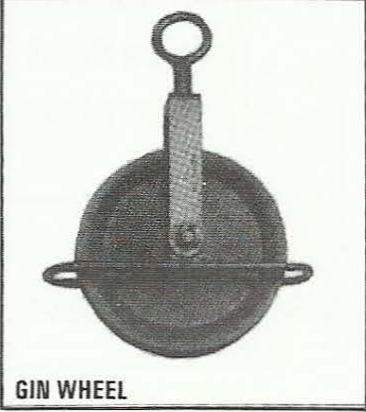
ALUMINIUM LADDERS



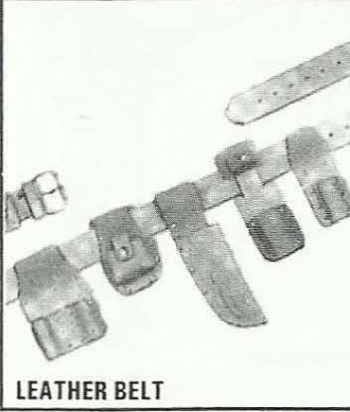
POLE LADDER



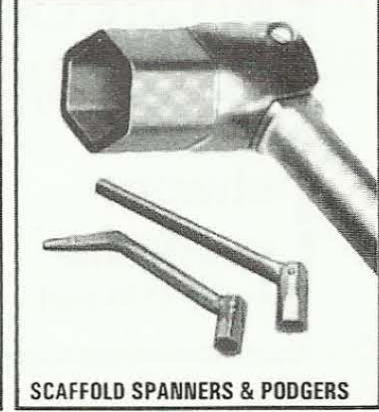
CASTOR WHEEL



GIN WHEEL



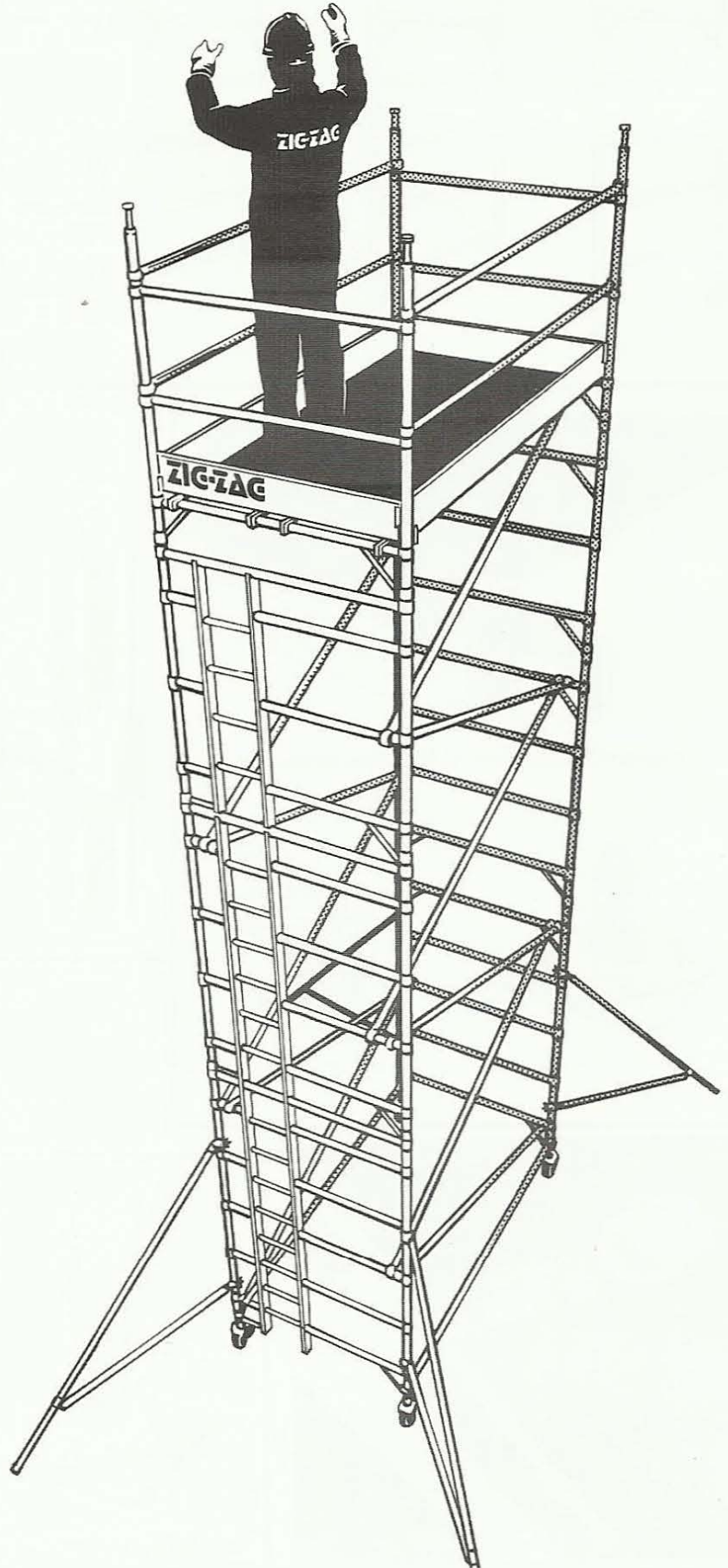
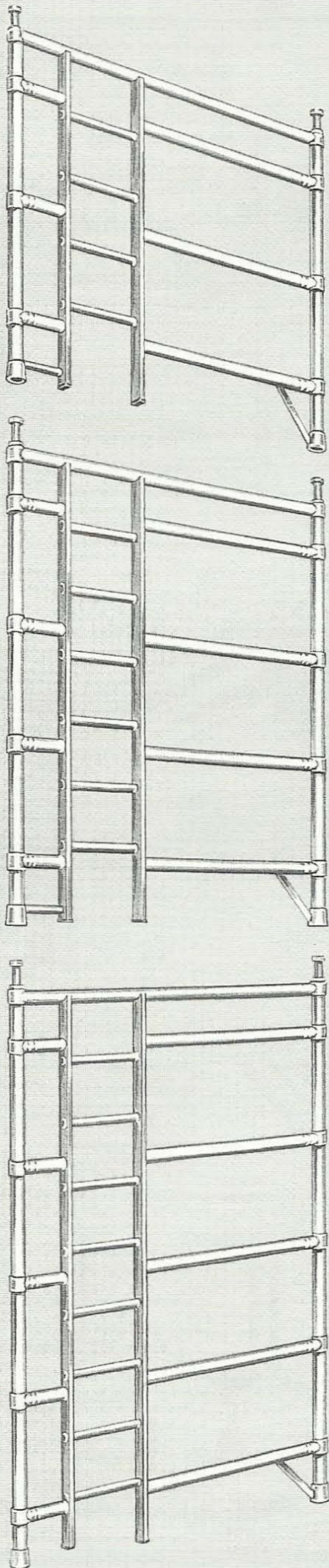
LEATHER BELT



SCAFFOLD SPANNERS & PODGERS

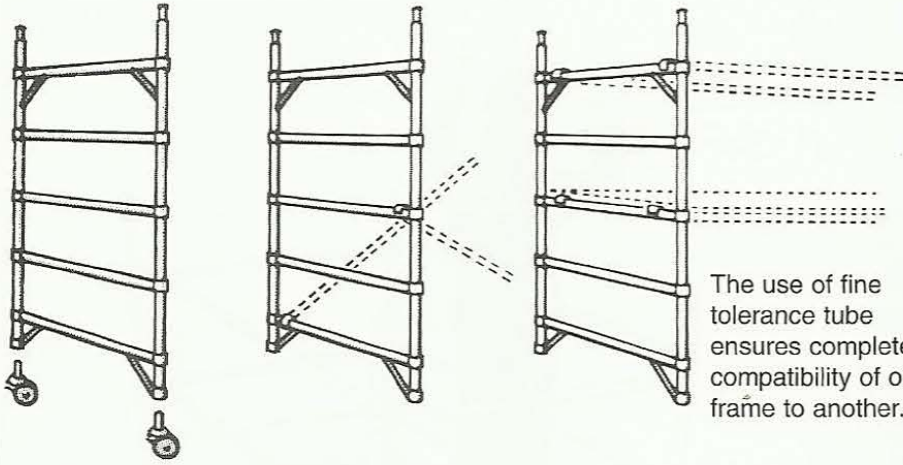
CERTIFIED PRODUCT

Manufactured under a BS 5750 Quality System accepted by BSI



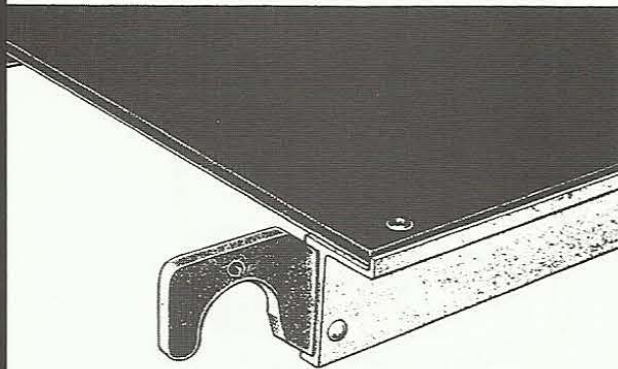
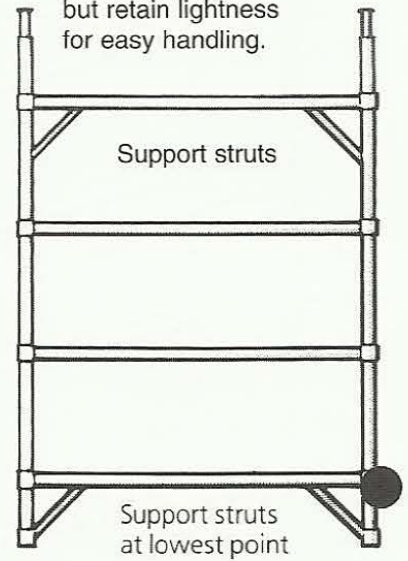
ZIG ZAG CONSTRUCTION FEATURES

All frames can be lower, upper or guard frames, thereby giving the renter the maximum hire opportunities from the minimum stock without the inconvenience of dedicated components.

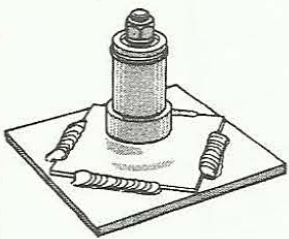


The use of fine tolerance tube ensures complete compatibility of one frame to another.

High stress areas are strengthened to give maximum durability but retain lightness for easy handling.



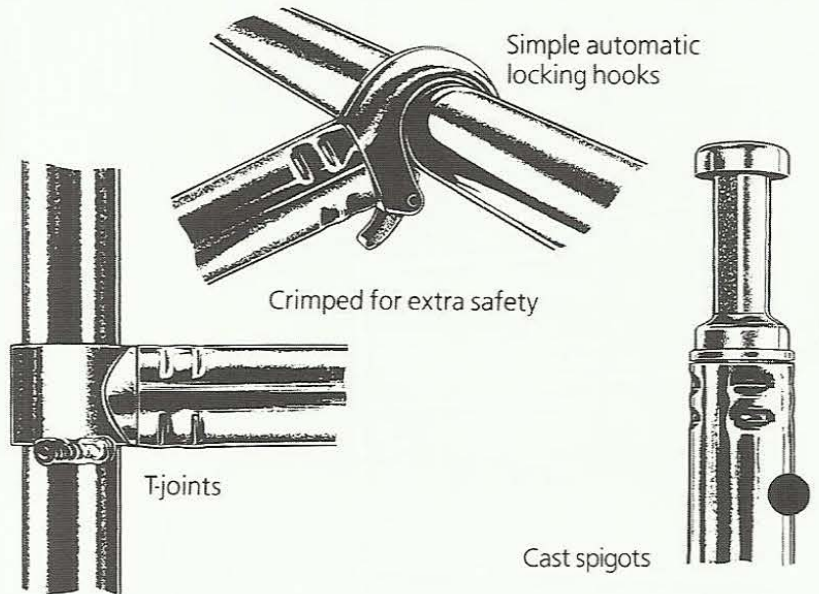
Rigid platform bearers with built-in edge protection



Swivel baseplate



Swivel couplers



Simple automatic locking hooks

Crimped for extra safety

T-joints

Cast spigots

Colour coded braces

Diagonal

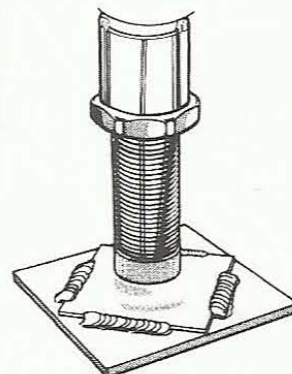
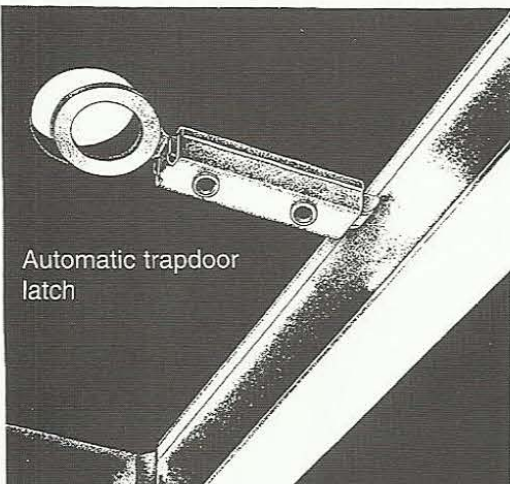
Horizontal

2.0 m

2.5 m

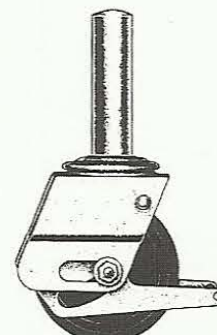
3.0 m

Automatic trapdoor latch

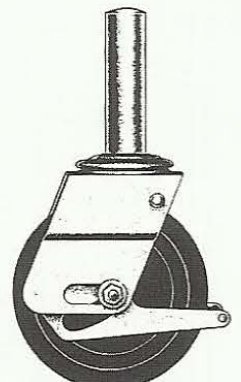


Fail-safe adjustable leg

Choice of castors

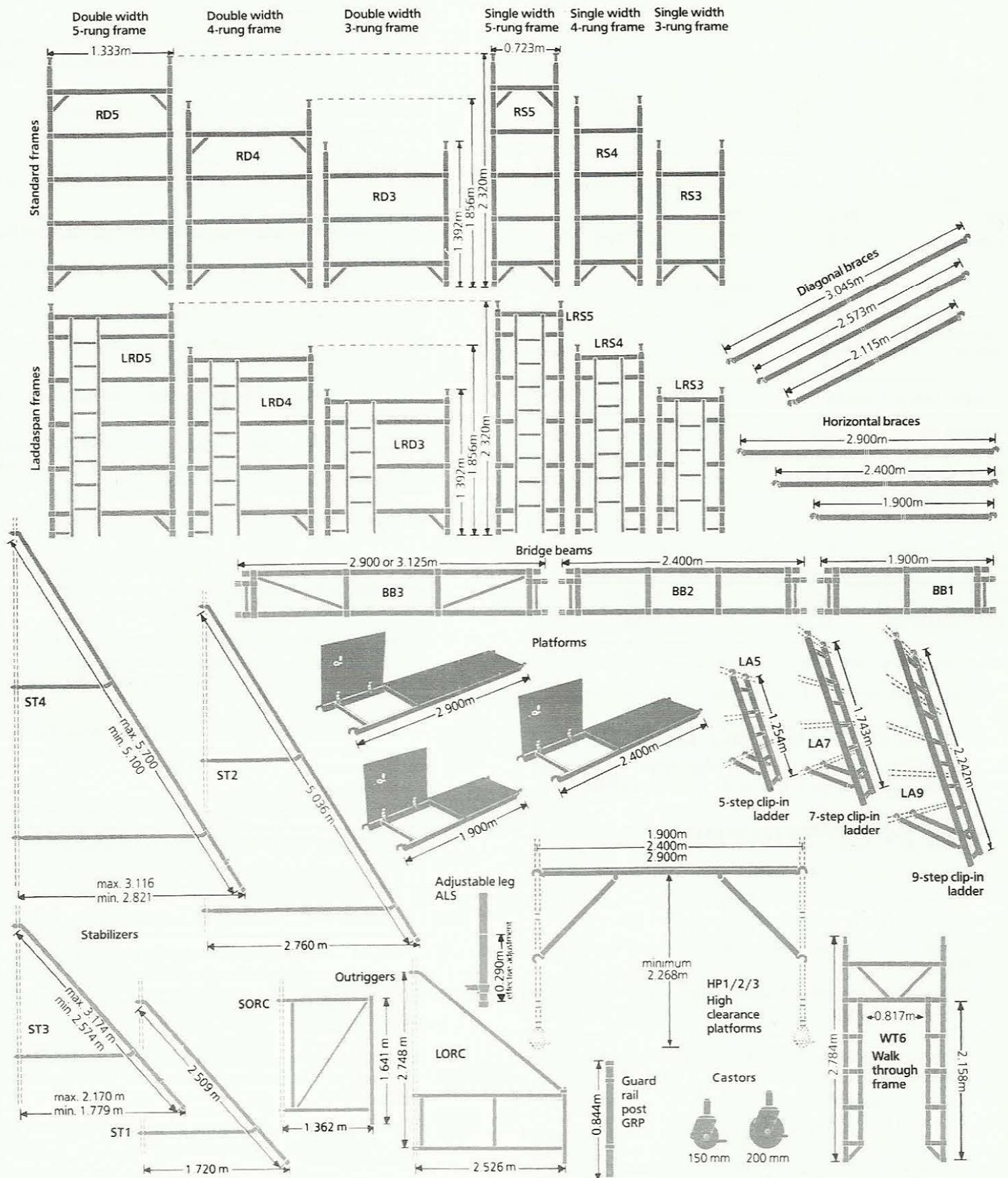


150 mm



200 mm

ZIG ZAG COMPONENTS



ZIG ZAG COMPONENT CODES

End Frames	72 cm Wide	133 cm wide	
Span			
5 rung	RS5		RD5
4 rung	RS5		RD4
3 rung	RS4		RD3
Handrail	GRS		GRD
Laddaspan			
5 rung	LRS5		LRD5
4 rung	LRS4		LRD4
3 rung	LRS3		LRD3
Platforms	190cm	240cm	290cm
61cm wide			
Plain	PP1	PP2	PP3
Trapdoor	TP1	TP2	TP3
Full Hatch	TPS		
Braces	190cm	240cm	290cm
Horizontal	HB1	HB2	HB3
Diagonal	DB1	DB2	DB3
Adjustable legs & Castors			
Adjustable leg	ALS		
150mm Castor	CT6		
200mm Castor	CT8		
Fixed Baseplate			
Swivel Baseplate	BPS		
Stabilisers	Outriggers	Brace	
Small STAB 1 & 3	SORC	HB2	
Large STAB 2 & 4	LORC	HB2	

Note : Many other Zig Zag components are available for specialist applications. Please contact the manufacturers.

SAFE WORKING LOADS

272 kg (600 lbs) on a single platform. maximum safe working load per tower is 900 g (1980 lbs).

TYING IN OF TOWERS

Conditions when ties must be used:

- Where the height of the scaffold is required to be in excess of 3 times the smallest base dimension.
- Where there is a possibility of adverse weather conditions, e.g. high winds.
- Where the structure is located where the wind has a tunnelling effect, e.g. large empty buildings where the ends are open.
- Where the work is of the nature where force is applied in a horizontal attitude, e.g. drilling.
- When a ginney wheel is to be used.
- It is advisable also to tie towers in when they are to be left unattended for any appreciable time. This is especially relevant if they are on the public thoroughfare or where the public has access, e.g. schools, High Streets, etc.

Spacing of ties:

The ties should be attached to the vertical scaffold members commencing at a point 3m from ground level. The spacing of ties should not exceed 4 m, either horizontally or vertically. If reveal ties are used only 50% of the total ties can be of the reveal type.

ZIG ZAG SAFETY NOTES

- Ensure scaffold is erected in accordance with the manufacturers assembly instruction leaflet.
- Ensure the scaffold is erected on a solid base. Use Soleboards where necessary.
- When erecting and using, ensure the scaffold is level and in contact with the ground by adjusting the wheels/baseplates and the stabilisers/outriggers.
- When erecting, brace the scaffold in accordance with the manufacturers assembly, instruction leaflet.
- Ensure that the stabilisers/outriggers are in position to maintain a height to base ratio of 3:1 if used externally, or 3.5:1 if used internally.
- Fit toe-boards and guardrails to all platforms over 2m high.
- Tie in or guy down scaffolds, whenever possible and all scaffolds over 10 m in height.
- Ensure the scaffold is secure when left unattended.
- Before use ensure the scaffold is complete and that the wheels are locked.
- Always climb scaffolds from the inside via ladders or stairways.
- Before moving the scaffold ensure that it is clear of obstructions, overhead and at ground level, and that no persons or materials are upon it.
- To move the scaffold only apply force by pushing at or near the base.
- Do note that substances such as hydrochloric (muriatic) acid and potash are highly corrosive to aluminium and can seriously affect the strength of the equipment.
- beware of strong wind conditions, especially between buildings. Always tie-in the tower to a rigid structure in exposed conditions. e.g. when the wind force exceeds Beaufort Scale 4.
- Avoid subjecting the tower to horizontal forces. Horizontal forces must not exceed 20kg on free-standing towers. Take care when a drill is being used. Tie in if required

CAUTION: The following statutory regulations apply to aluminium scaffolds:

- The Health and Safety at Work Act 1974.
- The Construction (Working Places) Regulations 1966.

Note : If in doubt as to whether the scaffold is safe or not refer to the manufacturers assembly instruction leaflet. If still in doubt contact the manufacturer.

MAINTENANCE RULES

- The equipment should be kept clean, especially joints and moving parts. Components must not be fitted by the use of force.
- All working parts e.g. plungers, should be lubricated lightly with oil.
- Do not let parts fall to the ground. Such abuse may reduce the structural integrity and load capacity of the equipment.
- In the event of damage, zig zag equipment must only be repaired by qualified personnel approved by the manufacturer.

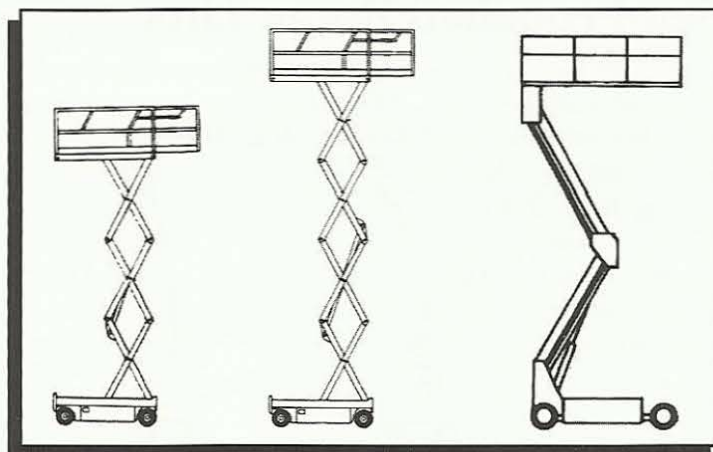
All dimensions quoted are nominal.

Self-Propelled Scissor Lifts

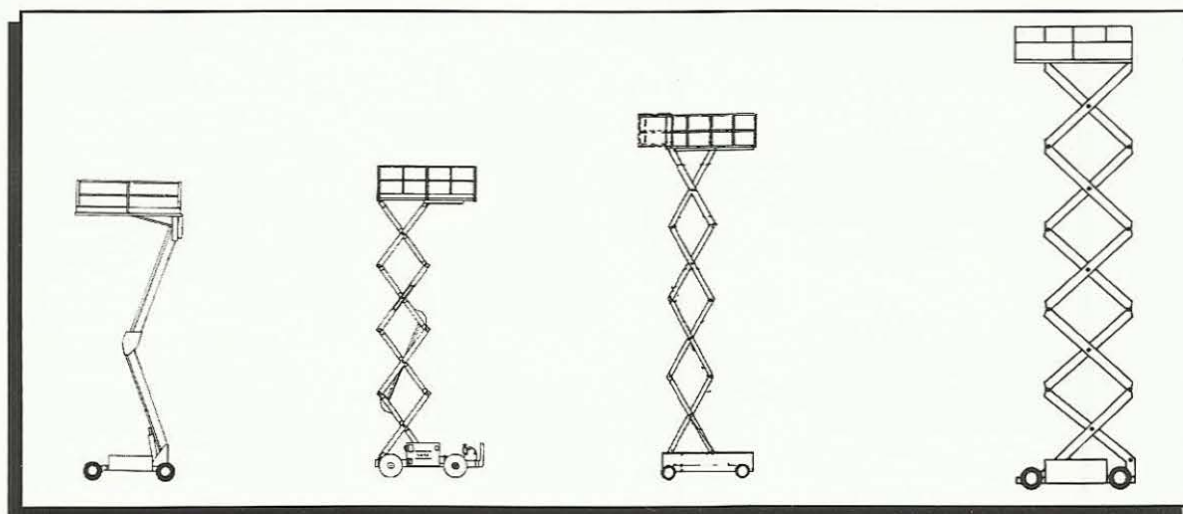
Scissor Lifts are essentially vertical aerial work platforms capable of sustaining high load capacities while retaining the flexibility of powered access. Although only a few are shown here. We have a range of models, providing the features and specifications to meet a wide range of requirements, with working heights up to 22m. There are power options including diesel, electric or bi-energy. Non-marking tyres are available on some models for internal applications.

Features Also Include:

- Up to one tonne capacity for men, materials and tools.
- Safety is improved with puncture proof tyres.
- Traversing decks for greater flexibility in elevated work positions. (some models)
- Power outlets on the platform provide safe, convenient use for power tools. (some models)
- Rough terrain package including 4-wheel drive, oscillating front axle and flotation tyres.
- Narrow aisle models.



Model	GS-1930	X 26	SL26BE
Working Height	7.6	10.00m	10.00m
Horizontal Reach			
Platform Height	5.8m	8.00m	7.92m
Platform Size	0.65mx1.58m	2.21mx1.17m	3.66mx1.78m
S.W.L.	227kg	454kg	680kg
Power Options	Electric	Electric	Bie-Energy/Diesel/Electric
Width	0.76m	1.22m	1.88m
Length	1.83m	2.35m	3.66m
Closed Height	2.1m	1.98m	2.46m
Gross Weight	1344kg	1957kg	2270kg
	CE Marked	CE Marked	CE Marked

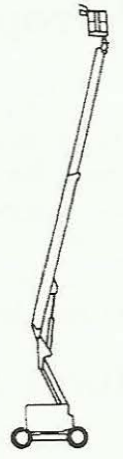
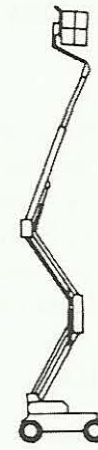


Model	SL 30	SM 3884	LX 41	LX 50
Working Height	11.00m	11.75m	14.50m	17.00m
Horizontal Reach				
Platform Height	9.00m	9.75m	12.50m	15.00m
Platform Size	4.22mx1.46m	3.56mx1.88m	3.64mx1.73m	1.78mx3.65m
S.W.L.	454kg	567kg	680kg	454kg
Power Options	Diesel	Diesel	Diesel	Diesel
Width	1.86m	2.13m	2.28m	2.29
Length	4.39m	3.89m	4.06m	4.06m
Closed Height	2.40m	2.64m	2.76m	3.00m
Gross Weight	2391kg	4155kg	4985kg	5702kg
	CE Marked	CE Marked	CE Marked	Ce Marked

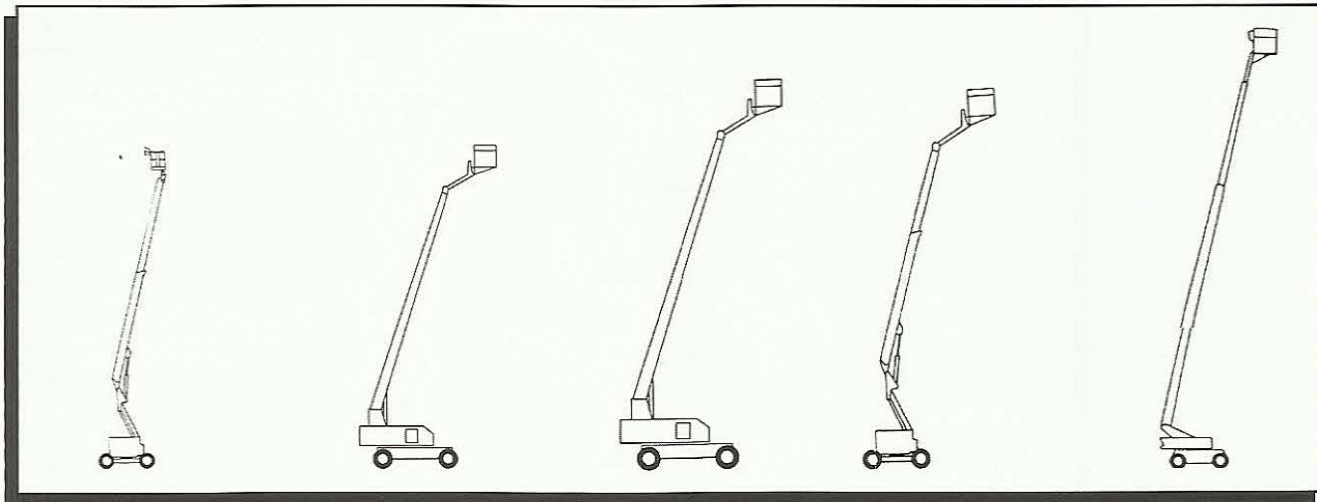
ACCESS POWERED PLATFORMS

Self-Propelled Boom Lifts

Boom Lifts have the flexibility to provide access to the most difficult overhead work positions. Although only a few models are shown here, We offer a whole fleet of boom lifts with working heights ranging from 7.9m to 35.4m, available in power options of diesel, electric or bienergy.



Model	20/8N	Z-30/20N	S40	L-45/22	AMZ50
Working Height	7.9m	11.00m	14.02m	15.54m	15.09m
Horizontal Reach	2.6m	6.40m	9.64m	7.00m	8.23m
Platform Height	6.1m	9.10m	12.20m	13.72m	13.26m
Platform Size	1.02mx0.79m	1.17mx0.76m	1.83mx0.76m	1.06mx0.76m	0.76mx1.22m
S.W.L.	181kg	227kg	227kg	227kg	227kg
Power Options	Electric	Electric	Diesel	Diesel/Electric	Diesel
Width	0.81m	1.20m	2.29m	1.80m	1.98m
Length	3.8m	5.20m	7.28m	5.40m	5.23m
Closed Height	2.00m	2.00m	2.48m	2.00m	2.05m
Gross Weight	4876kg	4000kg	5284kg	6536kg	6895kg
	CE Marked	CE Marked	CE Marked	CE Marked	Ce Marked



Model	AMZ66 XT	S 65	80HX+6	86 XT	MZ116
Working Height	19.96m	21.6m	26.2m	26.21m	36.53m
Horizontal Reach	13.11m	17.20m	23.4m	19.66m	18.3m
Platform Height	18.14m	19.80m	24.4m	24.38m	33.5m
Platform Size	0.9mx1.53m	1.83mx0.76m	0.91mx2.44m	0.91mx1.83m	0.92mx1.53m
S.W.L.	228kg	227kg	228kg	228kg	228kg
Power Options	Diesel	Diesel	Diesel	Diesel	Diesel
Width	2.29m	2.43m	2.59m	2.44m	
Length	7.83m	12.2m	10.2m	11.13m	
Closed Height	2.59m	2.74m	2.92m	2.94m	
Gross Weight	10750kg	12882kg	13200kg	19550kg	19500kg
	CE Marked	CE Marked	CE Marked	CE Marked	Ce Marked

PROPS

- 1 Props should always be erected truly vertically and loaded concentrically.
- 2 Props should always have the correct high tensile pin fitted. Failure of props can result if reinforcing rods, tie rods or material which may be inferior in quality or smaller in diameter are used instead of the high tensile pin.
- 3 Ensure that prop inner and outer tubes are straight, free from creases and telescope freely. Bent props should not be used.
- 4 Ensure that both head and base plates are flat and perpendicular to the tube.
- 5 Ensure the soffit formwork is adequately restrained from horizontal movement, either from containment by the permanent structure or by diagonal bracing.
- 6 To improve load bearing capacity lace props with tube and fittings. Wherever possible tie the lacing into the permanent structure.
- 7 Props should never be placed on top of one another to support high slabs.
- 8 Never throw the props down to the ground from a height. Always handle them carefully.

Please refer to the table below for loading data on UK props and suggested arrangements of main timber bearers.

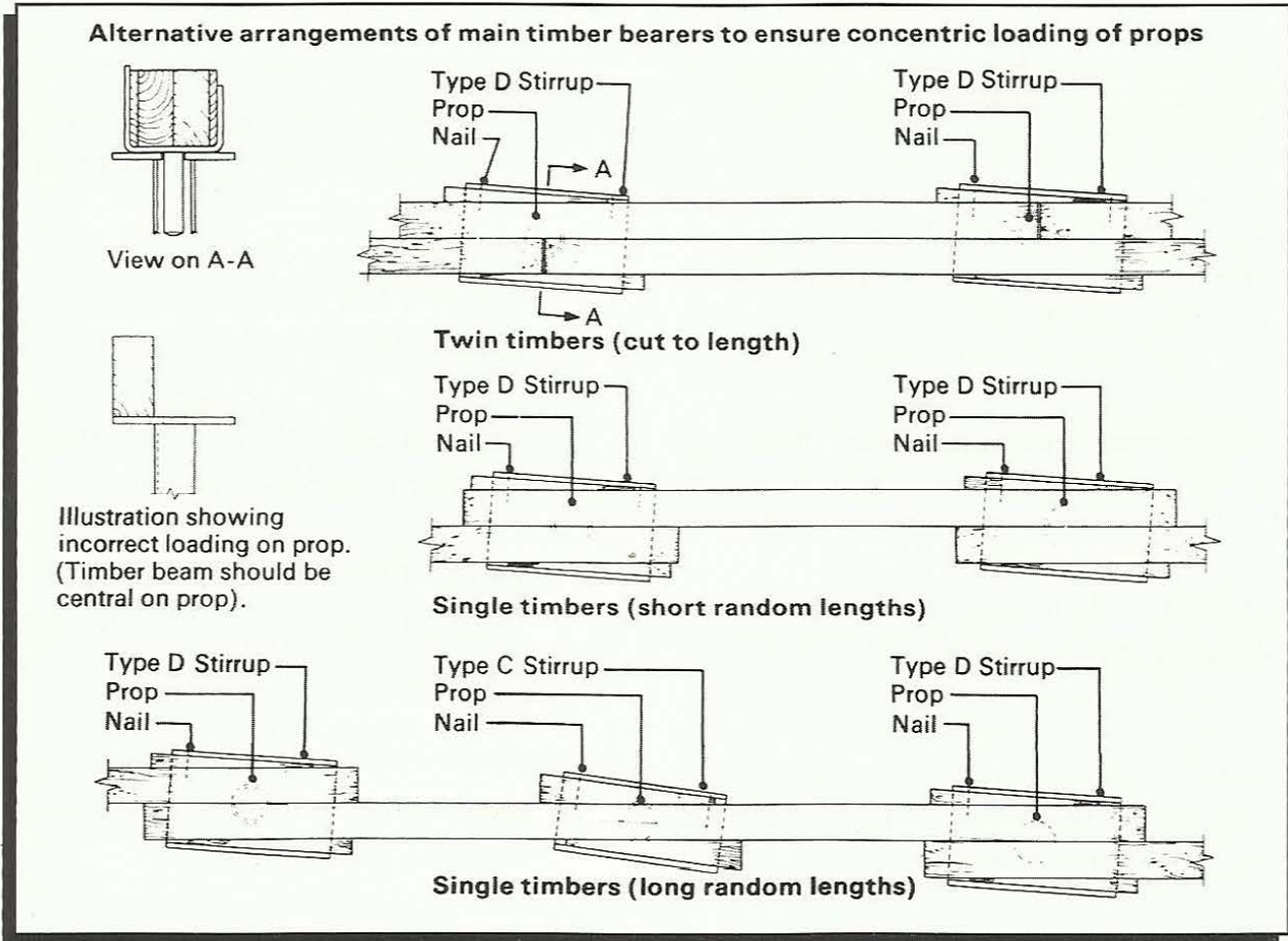
Remember, if you look after and maintain your equipment, it will look after you and increase your profits.

SAFE WORKING LOADS FOR UK MANUFACTURED PROPS - LOADS GIVEN IN KN

For normal purposes	Height	m	2.0	2.25	2.5	2.75	3.0	3.25	3.5	3.75	4.0	4.25	4.5	4.75
1 kilo Newton (kN) = 100 kg		ft	6.6	7.4	8.2	9.0	9.8	10.7	11.5	12.3	13.1	13.9	14.8	15.6
TABLE A props loaded concentrically and erected vertically.	Prop size 1 or 2		35	35	35	34	27	23						
	Prop size 3					34	27	23	21	19	17			
	Prop size 4							32	25	21	18	16	14	12
TABLE B props loaded concen- trically and erected 1½° max. out of vertical	Prop size 1 or 2 or 3		35	32	26	23	19	17	15	13	12			
	Prop size 4							24	19	15	12	11	10	9
TABLE C Props loaded 25 mm eccentricity and erected 1½° max. out of vertical.	Props size 1 or 2 or 3		17	17	17	17	15	13	11	10	9			
	Prop size 4							17	14	11	10	9	8	7
TABLE D Props loaded concen- trically and erected 1½° out of vertical and laced with scaffold tubes and fittings.	Props size 3					35	33	32	28	24	20			
	Prop size 4							35	35	35	35	27	25	21

SAFE SCAFFOLDING PRACTICES

PROPS



NOTES

TABLE A Safe working loads are based on props being truly vertical and loaded concentrically.

TABLE B Used for props to U-Form or similar type soffit formwork. Arrangements (see U-Form brochure or where stirrup heads are used with timber bearers to ensure concentric loadings.

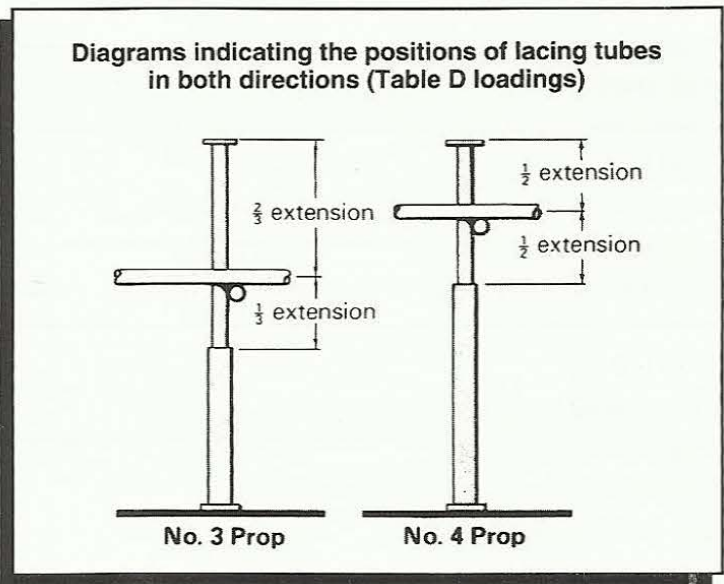
TABLE C Should be used for all cases where concentric loading is doubtful or cannot be guaranteed.

TABLE D Applies to No.3 and No.4 props where laced as shown in the diagrams. The working loads have been derived from normal strut calculations applied to the prop inner extension with the following assumptions.

1. Concentric loading to be guaranteed.
2. The soffit formwork is adequately restrained from horizontal movement, either from containment by the permanent structure or by diagonal bracing.

3. Horizontal lacing tubes are applied to all prop inner tubes in both directions. Horizontal restraint is effected by trying lacing to permanent structure or by diagonal bracing.

Tables B & C are based on information derived from the Construction Industry Research and Information, Technical Note No.79 "Safe working loads for adjustable props: the influence of prop condition and site workmanship."



SAFE SCAFFOLDING PRACTICES

Practical Scaffolding

1. Always check ground conditions for scaffolds to be erected upon.
2. Ensure that metal base plates are used under all standards.
3. Every scaffold requires adequate bracing in the form of ledger and facade bracing.
4. Ensure that the correct type of couplers are used for all connections - if in doubt, ask
5. Ensure that joints between tubes are staggered vertically and horizontally.
6. Ensure that the scaffold is adequately tied to the structure. Ties should not be more than 8.5m apart and on every other lift.
7. In a scaffold at least 50% of ties must be of the positive type.
8. Always ensure that the loading with materials on a scaffolding has been taken into consideration.
9. Ensure that working platforms are fully boarded and complete with guard rails and toe boards.
10. Correct transom spacing to boards being used is essential.
11. Working platforms over 2.0m in height should have safety rails fitted.
12. Safety rails should be fitted at minimum 0.910m, maximum 1.150m from boarded level.
13. Transoms should be spaced at not more than 1.5m centres for 38mm nominal thickness boards.
14. Tarpaulin sheets, etc. must not be fixed to a scaffold unless the scaffold has been specially designed.

Support Scaffolding & Decking

1. Check material before use for any rejects. Do not use damaged material.
2. Ensure the floor the scaffolding is resting on can take the load imposed on it.
3. Do not seat scaffolding on loose sand. If placing scaffolding on sand ensure it is properly compacted and sole plates are used.
4. Follow the design drawings that have been provided by the supplier. Should any changes be required, please inform your supplier and ask him to inspect the site and approve any alternatives.
5. Do not use jacks on maximum extension without installing bracing.
6. Ensure infills are installed at the correct centres for the thickness of plywood being used.
7. Ensure bracing is installed as per drawings supplied. Whenever possible brace around columns and against walls.
8. Where more than one standard is used in the height, ensure a ledger is placed in the pocket closest to the joint.

SAFE SCAFFOLDING PRACTICES

Tube and Fittings *Scaffolding Tubes*

1. Tube should never be thrown or dropped from the scaffold.
2. Partially cut tube should never be used.
3. Bent and damaged ends should be cut and burrs removed.
4. Tubes must not be split, bent, badly corroded or distorted.
5. Tube not meeting BS requirements, i.e. thin gauge water pipe or rusty tube, is totally unacceptable.
6. When dismantling scaffold always remove fittings from tube, making for easy storage and less damage.
7. Never hemp with tube longer than 4m in length.
8. When stacking tube on scaffolding for erecting or dismantling, never exceed the allowed weight (this being 635kg per double).
9. When you have stacked the tube on scaffolding or a floor level, wedges or ties around the bundle should be used to prevent movement.
10. Aluminium tube is sometimes used when placed on roofs or light canopies. Never use in the base lifts of steel scaffolding.

Fittings

1. Doubles with stretched cups, worn or loose threads should be discarded.
2. Fittings should never be dropped or bombed from any height.
3. If serviced and maintained properly they will give good service.
4. When check fittings are required, it is advisable to use doubles.
5. Although doubles can be used on a props inner, a special fitting has been designed for the outer leg.
6. Fittings should always be stacked as neatly as possible when loose. If not, bins should be provided.
7. At the end of the working day all materials should be stacked and placed in a neat and tidy fashion.
8. Above the height of 6m a rope and wheel is advised (gin wheel). This allows one man to pull up materials to the required lift.
9. The gin wheel should be checked that the centre pin is not worn and that the seat for the ropes is not obstructed.
10. Never try to pull material up the scaffold without the scaffold being tied to the building or a solid structure.
11. Fittings must not be distorted and moving parts must be sound and lubricated.

ACCESS AND WORKING SCAFFOLDS OF TUBE AND COUPLERS

Duty	Use of Platform	Distributed load on platforms kN/m ²	Max. number of platforms	Commonly used widths using 225mm boards	Max. bay length m
Inspection and very light duty	Inspection, painting, stone cleaning, light Cleaning and access	0.75	1 working Platform	3 boards	2.7
Light duty	Plastering, painting stone cleaning, glazing and pointing	1.50	2 working platforms	4 boards	2.4
General purpose	General building work including brickwork, window and mullion fixing, rendering, plastering	2.00	2 working platforms, +1 at Very light duty	5 boards or 4 boards + 1 inside	2.1
Heavy duty	Blockwork, brickwork, heavy cladding	2.50	2 working platforms, +1 at very light duty	5 boards or 5 boards + 1 inside or 4 boards + 1 inside	2.0
Masonry or Special duty	Masonry work, concrete create blockwork, and very heavy cladding	3.00	1 working platform, +1 at very light duty	6 to 8 boards	1.8

MAX. SPAN OF SCAFFOLD BOARDS

Nominal thickness of board	Max. Span between transoms	Min. overhang	Max. overhang
mm	m	mm	mm
38	1.5	50	150
50	2.6	50	200
63	3.25	50	250

SAFE SCAFFOLDING PRACTICES

Scaffold Towers

- A. The height of a mobile tower used internally must not exceed $3\frac{1}{2}$ times the smallest base dimension, e.g. 2.5m x 1.8m tower will not exceed a platform height of 6.3m ($3\frac{1}{2} \times 1.8$).
- B. Towers must only be used on firm and level ground.
- C. No tower is to be built with a base less than 1.2m.
- D. Internal mobile towers shall be maintained rigid on plan by use of plan bracing.
- E. Towers must never be moved with men or materials on them.
- F. When using a mobile tower with a platform above 10m in height, tie it in to the permanent structure when in use.
- G. Whilst the tower is in use lock the wheels, which must be of the swivel type, or use chocks to prevent movement.
- H. Wheels must be fixed to the tower so that they do not fall off when the tower is moved or a wheel is out of contact with the ground.

Mobile External towers

All of the above criteria apply except that the platform height shall not exceed 3 times the smallest base dimension.

Lightweight Scaffolding

- 1. Ensure frames are not bent or creased and that braces are straight.
- 2. If using plain bases ensure that the surface on which you are resting the frames is level. Wherever possible use sole plates to distribute the load and ensure that the ground is capable of taking the load imposed on it.
- 3. If using adjustable bases ensure the sole plates are resting on level ground. Level up one set of frames using a spirit level and level up the following frames to this same level. Ensure the ground is capable of taking the load imposed on it.
- 4. Ensure that you tie the frames, not the braces, into the building using tube and fittings. The tube must be connected to both of the uprights of the frames. Contact the manufacturer for spacing of ties.
- 5. Braces must be fixed according to manufacturer's instructions.
- 6. At no time must the lightweight scaffolding be erected to a height greater than that recommended by the manufacturer.
- 7. You must ensure that the scaffold boards you use not only span the distance between the frames, but also are used only in accordance with standard procedures (See tables attached).